

DBAL-A²



Technical Manual

**AN/PEQ-15A
DUAL BEAM AIMING LASER**

40090

STEINER 
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SAFETY SUMMARY

WARNING SUMMARY

This warning summary contains general safety warnings and hazardous materials warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel. Also included are explanations of safety and hazardous materials icons used with the technical manual.

FIRST AID NOTICE

First Aid - for first aid or artificial respiration, see FM 4-25.11, First Aid.

GENERAL SAFETY WARNINGS

This equipment produces visible/invisible laser light that can be harmful to your eyes and skin. For your protection:

- DO NOT stare into the infrared laser beam. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.
- DO NOT look into the infrared laser beam through binoculars or telescopes. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.
- DO NOT point the infrared laser beam at mirror-like surfaces. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.
- DO NOT shine the infrared laser beam into other individual's eyes. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

NOHD and NOHD-M for AN/PEQ-15A

LASER	SAFETY CLASS	NOHD (m)	NOHD (m)			NOHD-M (m)
		Skin	Unaided	7 X 50	8 cm	12 cm
Visible Aim - Low Power	Class II	0	0	0	0	0
Visible Aim - High Power	Class 3R	0	74	492	781	1159
I/R Aim - Low Power	Class 3R	0	25	0	0	0
I/R Aim - High Power	Class 3B	14	274	1581	2474	3606
I/R Illum - Low Power	Class 3R	0	21	0	0	0
I/R - Illum High Power	Class 3B	12	230	1309	2098	3067

MINIMUM OPTICAL DENSITY (OD) FOR THE AN/PEQ-15A

Visible Aim (m)	IR Aim (m)	IR Illuminator (m)
0.7	1.8	1.8

WARNING

High Power Modes (Class 3B Laser) - This equipment operates at two power levels/modes. The High Power modes of operation are not eye safe and are blocked with a safety screw. The safety screw may only be removed by a unit armorer or equivalent at the direction of the Unit Commander. The minimum optical density (OD) is 0.7 for visible aim and 1.8 for infrared. Never use high power mode unless authorized by your commander. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

WARNING

Ensure that the Activation Mode Selector Switch is in the Off position before inspecting the Exit Port Lenses of the AN/PEQ-15A. The laser can be inadvertently activated by depressing the fire button on the top of the housing if the Activation Selector Switch is not in the OFF position. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

NEVER boresight in the High Power mode of operation. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

WARNING

Explosion - If the Laser Borelight System (LBS) is used to boresight the AN/PEQ-15A, be sure to remove the LBS from the weapon prior to firing. Failure to comply may result in injury or death to personnel. In case of accident, seek immediate medical attention.

WARNING

Risk of Enemy Detection

Avoid prolonged activation of the AN/PEQ-15A. Failure to comply may increase the risk of detection by an enemy using a Night Vision Device (NVD). Failure to comply may result in injury or death to personnel. In case of accident, seek immediate medical attention.

WARNING

Accidental Discharge - Before mounting the AN/PEQ-15A to the host weapon, be sure the weapon is CLEARED of ammunition and on SAFE before proceeding with mounting procedures. Failure to comply may result in injury or death to personnel. In case of accident, seek immediate medical attention.

WARNING

Battery - The AN/PEQ-15A is powered by one DL 123A Lithium Manganese Dioxide (Li/MnO₂) Battery. Batteries may explode if disassembled, crushed, recharged, or exposed to high temperatures. The following precautions apply when handling lithium batteries:

DO NOT short circuit, puncture, or disassemble. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

DO NOT attempt to recharge battery. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

DO NOT mix brands of batteries. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

NEVER dispose of lithium batteries in a fire or in any way expose lithium batteries to excessive heat. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention. Avoid mechanical or electrical abuse. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

NEVER install a defective battery in the AN/PEQ-15A and do not install battery incorrectly. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

Store at room temperature. High heat may damage battery or cause battery to explode. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

GENERAL INTRODUCTION EQUIPMENT DESCRIPTION AND THEORY OF OPERATION

SCOPE

This manual is for use by operator/crew, unit, and field maintenance personnel. It applies to the Dual Beam Aiming Laser- Advanced2 (DBAL-A2), AN/PEQ-15A. Complete familiarization with this manual prior to using the equipment will ensure safe operation and maximum effectiveness of the AN/PEQ-15A.

Type of Manual: Operator and Field Maintenance Manual including Repair Parts and Special Tools List.

Model Number and Equipment Name: AN/PEQ-15A, Dual Beam Aiming Laser-Advanced2.

Purpose of Equipment: To covertly illuminate and direct fire using an infrared laser pointer (IR POINT) and infrared laser illuminator (IR ILLUM) for soldiers equipped with a Night Vision Device (NVD) or to point out a target using a visible laser (VIS POINT) for soldiers not using a Night Vision Device (NVD).

CORROSION PREVENTION AND CONTROL (CPC)

It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items. Corrosion specifically occurs with metals. It is an electrochemical process that causes the degradation of metals. It is commonly caused by exposure to moisture, acids, bases, or salts. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking. Plastics, composites, and rubbers can also degrade. Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photolytic (light, typically ultraviolet (UV)) processes. The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking.

WARRANTY INFORMATION

On all laser devices, Steiner offers a 1-Year Limited Warranty from the date of purchase that covers all laser, optical and electronic components, materials and workmanship.

NON-WARRANTY INFORMATION

Non-warranty repairs are subject to an evaluation fee. AN/PEQ-15A units that are not covered by the warranty will be tested and evaluated for failure. Customer permission and payment terms will be obtained prior to performing any repairs.

RETURN INSTRUCTIONS

For service, repair or replacement email: sales@steiner-eoptics.com, call 831-373-0701 and ask to speak with a Field Return Coordinator (FRC).

To assist the FRC with determining if the item is repairable, please provide the following information:

1. Serial Number of the defective item.
2. Thorough description of the malfunction, defect, or damage.
3. An explanation as to how the malfunction, defect, or damage occurred, if known. If the FRC determines that the item is under warranty or should be returned for repair, a Return Material Authorization (RMA) number will be provided.

Returning for Service or Repair

When returning the AN/PEQ-15A for service or repair, the following procedures should be followed to prevent any additional damage:

1. Be sure that the AN/PEQ-15A is free of all contaminants such as dirt or any other foreign material.
2. Remove the battery.
3. Place the Exit Port Covers over each of the lenses.
4. Place the AN/PEQ-15A in the Shipping Case or Carrying Case if available. If the Shipping Case is not available, individually package Each AN/PEQ-15A unit being returned in a suitable container.
5. Place the AN/PEQ-15A and a copy of the maintenance inspection, test report, or detailed description of the failure in a suitable packing/shipping container.
6. Mark the package with "Field Return" and the RMA number.
7. Ship via fastest, traceable, prepaid means to Steiner eOptics, 70 Garden Court, Monterey, CA 93940 USA

1.4 CROSS REFERENCES

Common Name	Official Name
Exit Port Covers	Cover, Protective Dust
Remote Cable Switch	Cable Assembly Switch
Pattern Generator	Optical Instrument Reticle
Safety Screw	Screw, Cap, Hexagon Head
Shipping Case	Bag, Textile
Loop Tape Fastener	Fastener Tape, Pile

1.5 LIST OF ABBREVIATIONS

C	Celsius (Centigrade)	m	Meter	NVD	Night Vision Device
CCW	Counter-clockwise	Max	Maximum	O.D.	Optical Density
cm	Centimeters	Mfr	Manufacturer	OIR	Optical Instrument Reticle
CTA	Common Table of Allowance	Min	Minimum	Para	Paragraph
CW	Clockwise	MOM	Momentary	PWR	Power
EA	Each			QTY	Quantity
F	Fahrenheit	mm	Millimeter	RAS	Rail Adapter System
HI	High	mrاد	Milliradians	RMA	Return Material Authorization
ILLUM	Illuminator	mW	Milliwatts	SR	Service Representative
in	Inches	nm	Nanometers	TM	Technical Manual
IR	Infrared	No	Number	VIS	Visible
LBS	Laser Borelight System	NOHD	Nominal Ocular Hazard Distance		
LED	Light Emitting Diode	NSN	National Stock Number		
LO	Low				

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

The AN/PEQ-15A consists of the components shown in Figure 2 and is detailed in Table 2.

The AN/PEQ-15A is a Class IIIB laser device that features a VIS POINT for day-light and low light operations as well as an IR POINT and IR ILLUM for use with a NVD. The IR beams can be operated individually or in combination in either Low Power (LO PWR) or High Power (HI PWR) settings. A Safety Screw, installed in the rear of the AN/PEQ-15A housing, prevents the operator from accessing the non-eye safe, HI PWR modes of operation.

Equipment Capabilities

The AN/PEQ-15A I/R POINT emits a tightly focused beam of I/R light for precise aiming of the weapon. A separate IR ILLUM provides supplemental I/R illumination of the target or target area. The IR ILLUM is equipped with an adjustable bezel to vary the size of the illumination beam based on the size and distance to the target.

The AN/PEQ-15A can be used as either a handheld illuminator/pointer or can be weapon mounted using the Throw Lever Mount. In the Weapon mounted mode, the AN/PEQ-15A can be used to accurately direct fire as well as illuminate and identify targets.

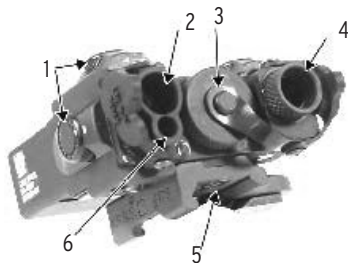


Table 1. AN/PEQ-15A Features

ITEM	DESCRIPTION
1	Boresight Adjusters
2	IR POINT
3	Battery Cap and Compartment
4	I/R ILLUM
5	Throw Lever Mount
6	IR POINT

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

For the location and description of all The AN/PEQ-15A major components, refer to Figure 2, Table 2.

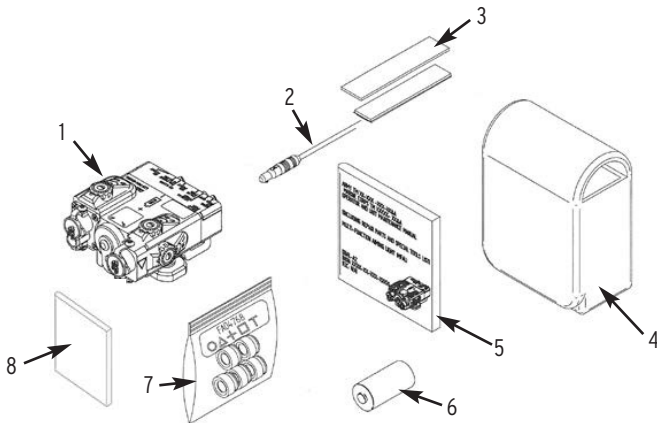


Figure 2. AN/PEQ-15A Major Components

Table 2. AN/PEQ-15A Major Components

ITEM	DESCRIPTION
1	AN/PEQ-15A Assembly
2	Remote Cable Switch, HighPressure MOM Remote, 7"
3	Tape Fastener Loop 5/8" (Black)
4	Soft Carrying Case
5	Operator and Field Maintenance Manual
6	Battery, DL 123A
7	Optical Instrument Reticle (OIR) (set of 5)
8	Quick Reference Guide

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

1. The AN/PEQ-15A Assembly. The AN/PEQ-15A device provides a VIS POINT, I/R POINT, and adjustable focus I/R ILLUM. The device is used for aiming, signaling, command and control, and for purposes of supplying supplemental I/R illumination.
2. Remote Cable Switch. The 7 inch Remote Cable Switch allows the user to activate the AN/PEQ-15A in a momentarily (MOM) fashion by depressing the pressure pad once. Pressing the pressure pad twice in rapid succession will

activate the AN/PEQ-15A continuously for 5 minutes. Pressing the pressure pad again will return the unit to momentary activation. The pressure pad provides a tactile (silent) click that indicates when the switch has been activated. The Remove Cable Switch has a hook strip fastener attached to the switch.

3. Tape Fastener Loop. The Tape Fastener Loop is provided to secure the Remote Cable Switch to the weapon in a position convenient to the user. The Tape Fastener Hook is pre-attached by the manufacturer to the pressure pad switch.
4. Shipping Case. The AN/PEQ-15A is provided with a Shipping Case that is only for initial delivery. The Textile Bag, found in the Repair Parts portion of the manual (WP 0019) can be used to carry the equipment/system attached to the individual's gear.
5. Operator and Field Maintenance Manual. The Operator and Field Maintenance Manual provides safety information, equipment information, operating instructions, mounting procedures, zeroing procedures, and operator and unit maintenance procedures.
6. Battery. One DL 123A battery is used to power the AN/PEQ-15A. The use of a high-quality, lithium battery is recommended.

WARNING

The AN/PEQ-15A is powered by one DL 123A Lithium Manganese Dioxide (Li/MnO₂) Battery. Batteries may explode if disassembled, crushed, recharged, or exposed to high temperatures. The following precautions apply when handling lithium batteries:

- DO NOT short circuit, puncture, or disassemble.
- DO NOT attempt to recharge.
- DO NOT mix brands of batteries.
- NEVER dispose of lithium batteries in a fire or in any way expose lithium batteries to excessive heat.
- Avoid mechanical or electrical abuse.
- NEVER install a defective battery in the AN/PEQ-15A . Do not install incorrectly.
- Store at room temperature.
- Refer to TB 43-0314 for proper disposal of the DL 123 Lithium Batteries.
- DO NOT store the AN/PEQ-15A with the battery installed.

Optical Instrument Reticle (OIR)

NOTE

Pattern Generators are not designed for accurate aiming of the weapon.

The Optical Instrument Reticles (OIR) are used for command and control. When placed in front of the I/R POINT or I/R ILLUM that has been focused to a point, they protect the shape of a circle ○, square , triangle Δ, plus sign +, or T-shape. The OIR is inserted into the I/R Point or I/R ILLUM aperture of the front cap assembly.

Quick Reference Guide

Provides at-a-glance instruction for basic operation, mounting, and bore-sighting of the AN/PEQ-15A.

Table 3. Weight, Dimensions, and Performance
WEIGHT

	8 oz ($\pm .5$ oz)
Weight with battery	224 grams (± 5 grams)

DIMENSIONS

Length	3.45 in. / 8.76 cm
Width	2.91 in. / 7.4 cm
Height (including mounting bracket)	1.9 in. / 4.8 cm

PERFORMANCE

Laser Wavelength

VIS POINT	635 nm ($\pm 3\%$)
I/R POINT	840 nm ($\pm 3\%$)
I/R ILLUM	840 nm ($\pm 3\%$)

Output Power

VIS POINT	4.4 mW ($\pm .5$ mW)
I/R POINT	30 mW (-7 mW / +10 mW)
I/R ILLUM	30 mW (-7 mW / +10 mW)

Beam Divergence

VIS POINT	0.5 x 1.5 mrad $\pm .3$ mrad)
I/R POINT	0.5 x 1 mrad ($\pm .3$ mrad)
I/R ILLUM	1 mrad to 105 mrad
Battery Life	5.5 Hours on IR Dual High

VIS POINT, IR POINT, AND IR ILLUM (STARLIGHT CONDITIONS)

VIS POINT Range	>600m
I/R POINT Range: Low/High	>600m / >2000m
I/R ILLUM Range: Low/High	>600m / >2000m

THEORY OF OPERATION

PRINCIPLES OF OPERATION

The AN/PEQ-15A, Dual Beam Aiming Laser-Advanced 2 (DBAL-A 2) is a multi-functional laser device that emits both a visible and infrared (IR) light used for precise aiming and target illumination. The visible and IR aiming lasers are co-aligned enabling the visible laser to be used to boresight both aiming lasers to a weapon without the need of night vision goggles. The IR lasers emit a highly collimated beam of IR light for precise weapon aiming and a separate IR-illuminating laser capable of being adjusted from a flood to a spot divergence. A visible red-dot aiming laser can also be selected to provide precise aiming of a weapon during daylight or night operations. The lasers can be used as handheld illuminator pointers, or can be weapon-mounted with included hardware. The co-aligned visible and IR aiming lasers emit through laser ports in the front of the housing.

CHAPTER 2—OPERATOR INSTRUCTIONS

DESCRIPTION AND USE OF OPERATOR CONTROLS AND INDICATORS

OPERATOR CONTROLS AND INDICATORS

Figure 1 shows features, controls, and indicators for the AN/PEQ-15A. Table 1 provides a brief functional description of each item. The “Key” column in Table 1 corresponds to the label numbers in Figure 1.

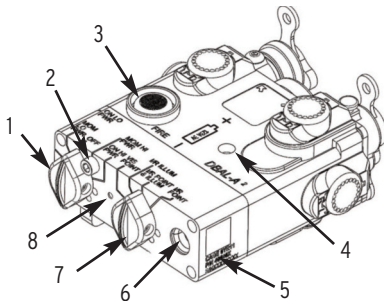


Figure 1. Controls and Indicators

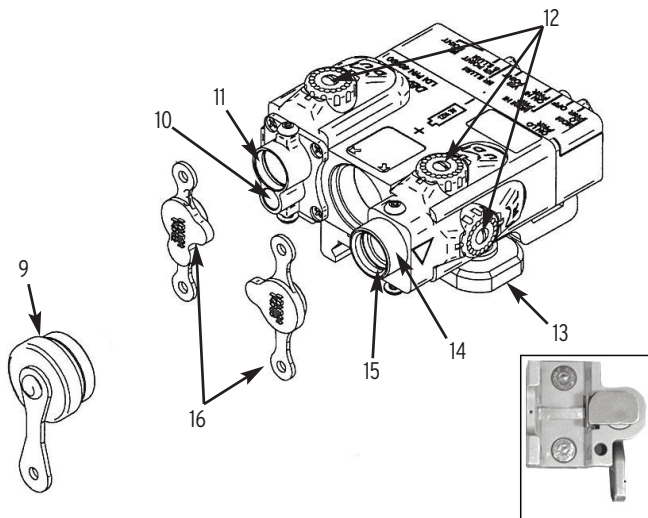


Figure 1. Controls and Indicators

Table 1. Controls, Indicators, and Functions

Key	Control / Indicator	Function
1	Activation Mode Selector Switch	Used to select modes of operation. Selections include: ON LO PWR, MOM LO PWR, OFF, MOM HI PWR, ON HI PWR.
2	Safety Screw	Blue colored 3/32 hex head screw that when installed in the Lockout Position, prevents the operator from access to the HI PWR modes of operation. Removal of the Safety Screw allows for access to all modes of operation.
3	Integrated Momentary Activation Switch (FIRE Button)	Activates the AN/PEQ-15A laser function selected by the Laser Mode Selector Switch.
4	Safety Screw	Allows for secure storage of the Safety Screw Storage Location after it has been removed from the Lockout Position.
5	Serial Number	Labeled serial number location for item accountability.
6	Remote Jack/Jack Plug Location	Provides an interface for the Remote Cable Switch. The AN/PEQ-15A comes with a Remote Jack Plug installed to protect the Remote Jack from debris and moisture.

Table 1. Controls, Indicators, and Functions

Key	Control / Indicator	Function
7	Laser Mode Selector Switch	Used to select the laser function modes. Selections include: VIS POINT, I/R ILLUM, I/R POINT & ILLUM, I/R POINT.
8	Activation Indicator/Low Battery Indicator LED	A green LED which indicates that the AN/PEQ-15A is actively emitting laser energy, and also acts as a Low Battery Indicator.
9	Battery Cap	Provides secure housing for the 3-volt DL123A battery that powers the AN/PEQ-15A.
10	Visible Point Laser	Used to provide a precise aim point or to positively identify/mark targets at close range during the day or night operations. It may also be used for boresighting the AN/PEQ-15A during daylight hours.
11	Infrared Point Laser	Used in conjunction with night vision devices to provide a precise aim point or to mark targets.

Table 1. Controls, Indicators, and Functions

Key	Control / Indicator	Function
12	Boresight Adjusters	Adjusts the VIS POINT, I/R POINT and I/R ILLUM for elevation and azimuth. Each adjuster click will move the laser point approximately 1cm at 25 meters.
13	Throw Lever Mount	Used to attach the AN/PEQ-15A to any weapons equipped with a MIL-STD-1913 rail.
14	I/R ILLUM Focus Knob	Varies the illumination beam spread from flood to spot, based on the range and size of the area to be illuminated.
15	Infrared Illuminator	Used in conjunction with night vision devices to provide variable focused IR illumination of the intended target area.
16	VIS POINT, I/R POINT, and I/R ILLUM Exit Port Covers	Prevent laser energy emission when properly installed over the laser exit ports. The exit port covers are held in place by the retention studs located above and below each exit window.

OPERATION UNDER USUAL CONDITIONS: ASSEMBLY AND PREPARATION FOR USE

INITIAL SETUP:

Materials/Parts

Battery, Non-Rechargeable (WP 0027, Table 1, Item 10)

References

Refer to TB 43-0134

UNPACKING THE EQUIPMENT

Before unpacking the equipment, verify that all major components listed in Table 1 are present. Check the AN/PEQ-15A to ensure the following additional items are included:

- a. Battery Cap
- b. Safety Screw
- c. Remote Jack Plug
- d. Aim Neutral Density (ND) / Opaque Lens Cap
- e. Illuminator Diffuser Lens Cap
- f. Integral Rail Grabber Bracket

If any of the major components or items listed above are missing, seek guidance from the equipment issuing authority.

BATTERY HANDLING

WARNING

- DO NOT heat, incinerate, short circuit, puncture, mutilate, or attempt to disassemble any battery.
- DO NOT USE any battery which shows signs of damage such as bulging, swelling, disfigurement, leaking, or staining inside the plastic packaging. Keep all batteries in their original packaging until ready for use.
- DO NOT place lithium batteries in ordinary trash; turn them in for disposal in accordance with local regulations. Refer to TB 43-0134, BATTERIES, DISPOSITION AND DISPOSAL for additional information regarding storage, handling, and disposal of all kinds of batteries.
- ALWAYS replace all of the batteries at the same time using only fresh batteries of the same brand.
- DO NOT carry loose batteries in pockets containing metal objects such as coins, keys, etc. Metal objects can cause the batteries to short circuit and become very hot.
- Use of incorrect batteries poses a risk of fire or explosion. Be aware that batteries do exist with similar physical characteristics to the DL123A battery, but with a different voltage and / or polarity path. Ensure that only 3V lithium batteries with a raised positive (+) terminal are installed in the AN/PEQ-15A.

NOTE

The AN/PEQ-15A is powered by one 3-V lithium battery.

Battery Inspection

Before installation, inspect the lithium batteries for any cracks, dents, leakage, or bulging. Never install a defective battery in the AN/PEQ-15A.

WARNING

Ensure the Mode Selector Switch is turned to the O (OFF) position and lens cover and safetyscrews are in place before attempting to install, remove, or replace batteries. Failure to comply may lead to laser radiation exposure possibly resulting in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

CAUTION

Do not ship or store the AN/PEQ-15A with batteries installed. Failure to comply may result in damage to equipment.

Battery Installation

1. Unscrew the Battery Cap (Figure 1) and install one battery (Figure 1) with the positive end facing out toward the Battery Cap (Figure 1). Proper battery orientation marking (Figure 1) is clearly marked on the AN/PEQ-15A housing.
2. Replace and tighten the Battery Cap (Figure 1) by turning clockwise.

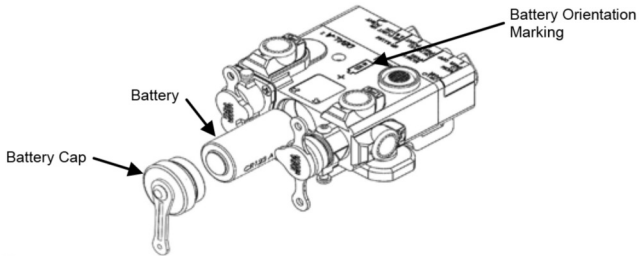


Figure 1. Battery Installation

MOUNTING CONFIGURATIONS / PROCEDURES

Throw Lever Mount

The AN/PEQ-15A is equipped with a Throw Lever Mount (Figure 2) that is designed for direct attachment to weapons with a MIL-STD-1913 rail.

Mounting Configurations

Table 1 lists possible AN/PEQ-15A Mounting configurations to be used with various weapons.

Table 1. Mounting Configurations

Weapon	Configurations
M16A4	Top, Left, or Right Mount
M4/M4A1	Top, Left, or Right Mount
M240B	Feed Tray Cover Rail Mount
M240B	Left or Right Side Mount on Forward Rails
M249 SAW	Feed Tray Cover Rail Mount
M249 SAW	Left or Right Side Mount on Forward Rails

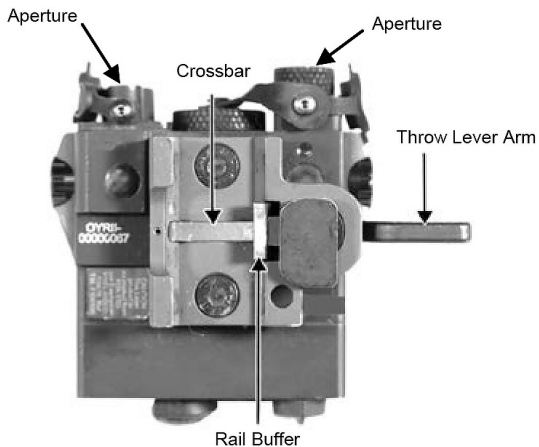


Figure 2. Throw Lever Mount

Mounting Procedures

Refer to Table 1 for AN/PEQ-15A mounting configurations.

WARNING

Before mounting the AN/PEQ-15A to the host weapon, be sure the weapon is CLEARED of ammunition and on SAFE before proceeding with mounting procedures. Failure to comply may result in injury or death to personnel. In case of accident, seek immediate medical attention.

NOTE

- The AN/PEQ-15A may be placed at any position (forward and aft) on the rail that is most convenient for the operator. If the AN/PEQ-15A is removed from the rail, the operator must make note of the position at which it was zeroed, and return it to that same position in order to ensure that zero is retained.
- When mounting the AN/PEQ-15A on the M240, use mounting slots 23 and lower to avoid possible problems with the MIL-STD-1913 rail mounting screws.
- Failure to fully close the Throw Lever Mount will cause zero retention issues.
- AN/PEQ-15A is for use on weapons where the MIL-STD-1913 rail is parallel with the bore of the weapon. In the factory neutral position, the VIS POINT / I/R POINT should project on the same side of the target as the laser is mounted and must fall within 10.2 cm of the bore at 25 meters.

Mounting Procedures

1. Open the Throw Lever Mount (Figure 2) so that it is perpendicular to the AN/PEQ-15A housing.
2. Hold the AN/PEQ-15A with the laser apertures (Figure 2) facing in the direction of the muzzle of the weapon.
3. Place the Rail Buffer (Figure 2) against the left side of the MIL-STD-1913 rail and align the Crossbar (Figure 2) on the bottom of the mount with a slot on the rail buffer (Figure 2).
4. While pushing down and forward on the AN/PEQ-15A, so that the Crossbar (Figure 2) contacts the front of the slot on the MIL-STD-1913 rail, rotate the Throw Lever Arm (Figure 2) so that it is parallel with the body of the laser housing.

OPERATION UNDER USUAL CONDITIONS: USING THE AIM LASERS AND IR ILLUMINATOR

MODES OF OPERATION

Table 1 describes the modes of operation for the AN/PEQ-15A.

WARNING

- Laser settings designated as Safety Class 1 or 3R (Low Power) may be used for force-on-force training only if safety screws are installed in the lockout positions and opposing forces are beyond the NOHD values shown in the WARNING SUMMARY, Table 1. Failure to comply to the warnings may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.
- Laser settings designated as Safety Class 3B shall NOT be used for force-on-force training. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

NOTE

AN/PEQ-15A will not operate if the rotary switches are not precisely aligned with the marked switch position.

Activation Mode Selector Switch

WARNING

To prevent inadvertent activation of the lasers, the AN/PEQ-15A Activation Mode Selector should be in the OFF position with safety screws installed when not in use. Failure to comply may result in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

The Activation Mode Selector Switch (Figure 1) is located on the left rear of the AN/PEQ-15A Housing. It is used to select between the HI PWR and LO PWR modes of operation when the Remote Cable Switch or the Integrated Momentary Activation Switch is depressed. The Activation Mode Selector Switch can also be used to turn the AN/PEQ-15A ON continuously. Table 1 shows the five (5) positions for Activation Mode Selector Switch (Figure 1). Table 1. Activation Mode Selector Switch Functions.

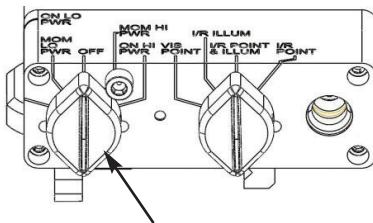


Figure 1. Activation Mode Selector Switch

Table 1. Activation Mode Selector Switch Functions.

POSITION	USE	REMARKS
ON LO PWR	On Continuous in Low Power. Activates the selected laser function in LO PWR continuously.	Do not use this setting in areas where the laser light may be viewed by enemy forces. Primarily used for bore sighting the laser to the weapon in low light conditions.
MOM LO PWR	Momentary Low Power. Activates the selected laser function in LO PWR when the Remote Cable Switch or Integrated Momentary Activation Switch is depressed.	Pressing the pressure pad twice in rapid succession will activate the AN/PEQ-15A continuously for 5 minutes. Pressing the pressure pad again will return the unit to momentary activation.
OFF	OFF	The AN/PEQ-15A will not operate.
MOM HI PWR	Momentary High Power. Activates the selected laser function in HI PWR when the Remote Cable Switch or Integrated Momentary Activation Switch is depressed.	Pressing the pressure pad twice in rapid succession will activate the AN/PEQ-15A continuously for 5 minutes. Pressing the pressure pad again will return the unit to momentary activation.

Table 1. Activation Mode Selector Switch Functions.

POSITION	USE	REMARKS
ON HI PWR	On Continuous in High Power. Activates the selected laser function in HI PWR continuously.	Do not use this setting in areas where the laser light may be viewed by enemy forces. Used for long distance pointing, aiming, or illumination.

Laser Mode Selector Switch

The Laser Mode Selector Switch (Figure 2) is located to the right of the Activation Mode Selector Switch (Figure 1) on the back of the AN/PEQ-15A housing. This Laser Mode Selector Switch (Figure 2) is used to select between the laser functions. Table 2 shows the four (4) positions for the Laser Mode Selector Switch (Figure 2).

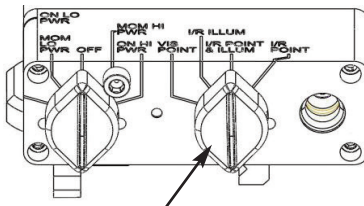


Figure 2. Laser Mode Selector Switch

Table 2. Laser Mode Selector Switch Functions.

POSITION	USE	REMARKS
VIS POINT	Visible Laser Pointer. Selects only the VIS POINT for activation.	Used for pointing or aiming at close range in daylight or at longer range in low light conditions.
I/R ILLUM	Infrared Illuminator. Selects only the I/R ILLUM for activation.	Used to provide I/R illumination of a target or area that is shadowed.
I/R POINT AND ILLUM	Infrared Pointer and Illuminator. Selects both the IR POINT and ILLUM for simultaneous activation.	Illuminates the target area and provides an aiming point to accurately engage the target with small arms fire.
I/R POINT	Infrared Pointer. Selects only the I/R POINT for activation.	Used for long distance pointing or aiming.

Blue Safety Screw

A removable Safety Screw (Figure 3) installed in the Lockout Position prevents the Operator from accessing the High Power modes of operation. This configuration is appropriate for a training environment or when the AN/PEQ-15A is being stored. At the Commander's discretion, the Maintainer may remove the Safety Screw (Figure 3) when access to the High Power laser settings is required (refer to WP 0015, Safety Screw Replacement). The Safety Screw Storage Location (Figure 3) allows for secure storage of the Safety Screw (Figure 3) after it has been removed from the Lockout Position.

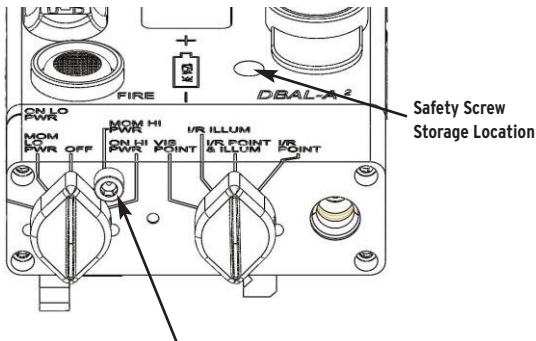


Figure 3. Safety Screw in Lockout Position

MODE ACTIVATION

Once the mode of operation has been selected, the AN/PEQ-15A may be used in that mode by activating the system as follows:

Momentary Operation

Pressing and holding the Integrated Momentary Activation Switch (Figure 4) activates the AN/PEQ-15A laser function selected by the Laser Mode Selector Switch (Figure 4). When the switch is released, the AN/PEQ-15A turns off.

Continuous Operation

Pressing the Integrated Momentary Activation Switch (Figure 4) twice in rapid succession (double-tap) will activate the AN/PEQ-15A in a continuous ON mode for 5 minutes. Pressing the Integrated Momentary Activation Switch (Figure 4) will return the unit to momentary mode.

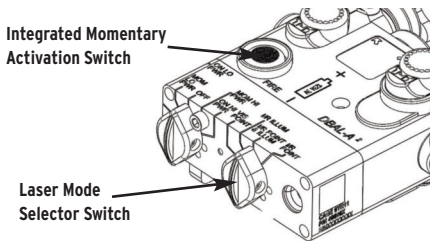


Figure 4. Integrated Momentary Activation Switch

REMOTE CABLE SWITCH

CAUTION

When the Remote Cable Switch is plugged into the Remote Jack, it automatically locks in place. To remove it, pull back on the cable sleeve. Do not remove the Remote Cable Switch by pulling on the cable. Failure to comply may result in damage to equipment.

NOTE

The AN/PEQ-15A comes with a Jack Plug installed in the Remote Jack that must be removed and stored before installing the Remote Cable Switch.

When installed, the Remote Cable Switch (Figure 5) may be used to provide the same functionality as the Integrated Momentary Activation Switch (Figure 4) and is operated in the same manner. The Remote Cable Switch (Figure 5) plugs into the Remote Jack (Figure 5). It is then secured to the weapon to best suit the operator's firing preference using the hook and loop fastener tape.

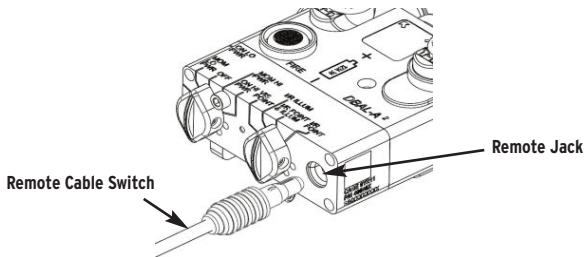


Figure 5. Remote Cable Switch Installation

USING THE AN/PEQ-15A LASERS

VISIBLE / IR AIM LASERS

Visible and IR Aim Laser modes of operation are selected and activated as described in Figure 1 and 2 and Table 1 and 2 respectively.

Optical Instrument Reticles (OIR)

WARNING

Pattern generators are NOT to be used as a safety lens cap for the prevention of laser output. Failure to comply may lead to laser radiation exposure. In case of exposure, seek immediate medical attention.

NOTE

- Pattern Generators are not designed for accurate aiming of the weapon.
- Exit Port Covers are not intended for use over the Optical Instrument Reticles.
- Use of a Pattern General in the IR Illum should be dialed to the Spot setting in order to have the sharpest image and best results.

Five Optical Instrument Reticles (OIR), also known as Pattern Generators, are supplied with the AN/PEQ-15A for command and control purposes. When an OIR is installed in front of the I/R POINT or the I/R ILLUM that has been focused to a spot, it will project the shape of a circle, triangle, plus sign, square, or T-shape as shown in Figure 6.

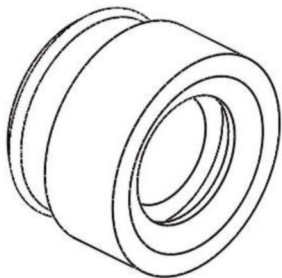


**Figure 6. Optical Instrument Reticles (OIR)
(Pattern Generator Shapes)**

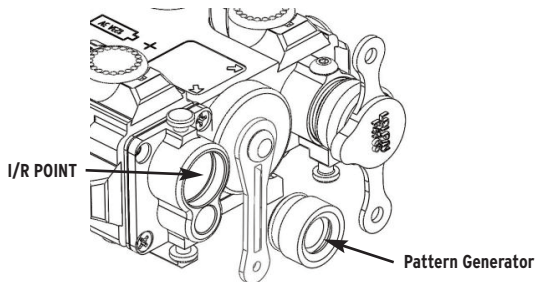
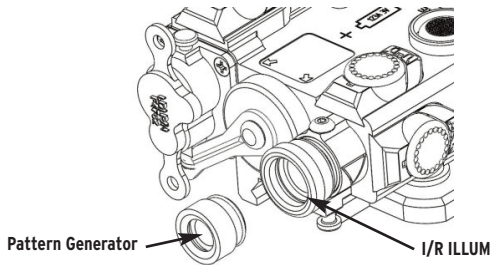


Figure 7. Pattern Generator Installation

IR ILLUMINATOR

Beam Size

The IR illumination beam may be varied from flood to spot by rotating the Illuminator Focus Knob (Figure 8). Direction of rotation and corresponding beam size is marked on the front of the AN/PEQ-15A .

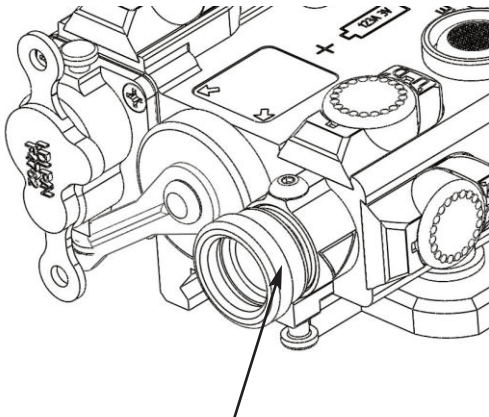


Figure 8. IR Illuminator Focus Knob

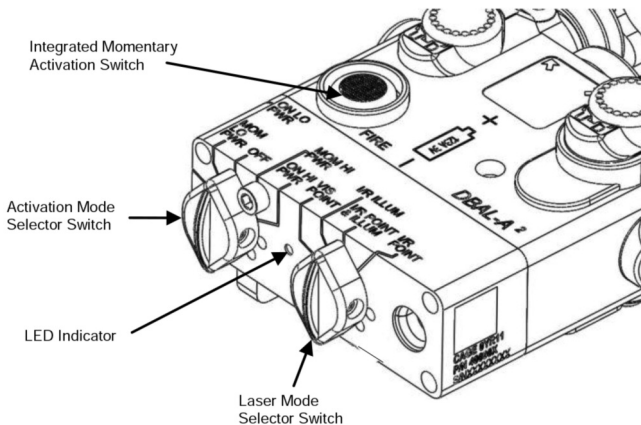


Figure 9. Activation Indicator/Low Battery Indicator

Activation Indicator/Low Battery Indicator

The LED Indicator (Figure 9) indicates that the AN/PEQ-15A is actively emitting laser energy. It also acts as a Low Battery Indicator. When the Activation Mode Selector Switch (Figure 9) is turned to an ON position (ON LOW PWR / ON HI PWR), the LED Indicator (Figure 9) lights up indicating that the laser is functioning in a constant ON mode.

When the Activation Mode Selector Switch (Figure 9) is turned to a Momentary Mode (MOM LO PWR / MOM HI PWR), the LED Indicator (Figure 9) will light up if either the Remote Cable Switch (Figure 5) or Integrated Momentary Activation Switch (Figure 9) is depressed, indicating that the laser is ON. The LED Indicator (Figure 9) will remain lit until the Integrated Momentary Activation Switch (Figure 9) or Remote Cable Switch (Figure 5) is released.

In the Momentary Mode, when the Remote Cable Switch (Figure 5) or Integrated Momentary Activation Switch (Figure 9) has been depressed twice in rapid succession, the LED Indicator (Figure 9) will light up indicating that the laser is functioning in a constant ON mode. The LED Indicator (Figure 9) will remain lit for 5 minutes or until Integrated Momentary Activation Switch (Figure 9) or Remote Cable Switch (Figure 5) is pressed once again to return the unit to momentary activation.

If the LED Indicator (Figure 9) starts to blink, the battery is low and should be replaced. Once the LED starts to blink, both the I/R POINT (Figure 7) and I/R ILLUM (Figure 7) will continue to operate in HI PWR modes for approximately 1/2 hour. The battery should be replaced as soon as the Low Battery indicator starts to blink.

OPERATION UNDER USUAL CONDITIONS: BORESIGHTING / ZEROING PROCEDURES

ADJUSTERS

The AN/PEQ-15A is equipped with boresight adjusters for independent adjustment of the aiming and illumination beams in both elevation and azimuth.

Aim Laser Adjusters

The AN/PEQ-15A Visible and IR Aim Lasers are co-aligned. Therefore, a single set of adjusters moves both aiming beams, and boresighting / zeroing can be accomplished using either the Visible or IR Aim Laser. Table 1 indicates the direction of adjuster rotation and shot group movement for the VIS POINT and I/R POINT when the AN/PEQ-15A is Top Mounted. Tables 2 and 3 indicate the direction of adjuster rotation and shot group movement for the VIS POINT and I/R POINT when the AN/PEQ-15A is Side Mounted (left / right).

Illuminator Adjusters

Table 4 indicates the direction of adjuster rotation and illumination area movement for the I/R ILLUM when the AN/PEQ-15A is Top Mounted. Tables 5 and 6 indicate the direction of adjuster rotation and illumination area movement for the I/R ILLUM when the AN/PEQ-15A is Side Mounted (left / right).

Illuminator Adjusters

Table 4 indicates the direction of adjuster rotation and illumination area movement for the I/R ILLUM when the AN/PEQ-15A is Top Mounted. Tables 5 and 6 indicate the direction of adjuster rotation and illumination area movement for the I/R ILLUM when the AN/PEQ-15A is Side Mounted (left / right).

Placing a Positive Load on the Adjusters

Positive load is the controlled compression of the spring within the adjuster mechanism to ensure the highest level of accuracy is maintained after the AN/PEQ-15A / weapon combination is boresighted or zeroed.

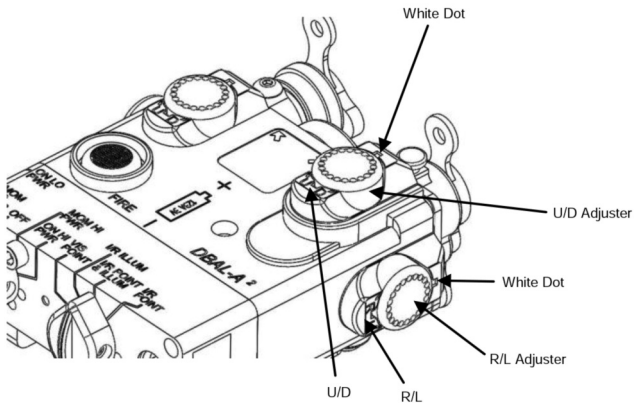


Figure 1. Factory Neutral Preset

FACTORY NEUTRAL PRESET

CAUTION

DO NOT over-adjust the adjusters by forcing them beyond their end of travel. Failure to comply may result in damage to equipment.

NOTE

- ALWAYS Boresight/Zero the AN/PEQ-15A starting with the Adjuster marked U/D.
- When moving the adjusters, make sure that the adjustment mechanism has engaged a detent and has not stopped between detents. Failure to properly engage a detent may adversely impact accuracy as the laser may move to the next detent when the weapon is fired.
- The adjuster may offer some resistance as you turn it in a CW direction from the factory neutral position. When the adjuster is harder to turn it has reached the maximum CW travel.

The AN/PEQ-15A is preset at the factory to a neutral position. In the neutral position the laser beam is parallel to the bore of the weapon. The VIS POINT / I/R POINT can be returned to the factory alignment (neutral position) using the following procedure:

1. Turn the U/D adjuster (Figure 1) CW to the natural stop.
2. Turn U/D adjuster (Figure 1) CCW one and one-quarter ($1\frac{1}{4}$) turn.
3. Turn U/D adjuster (Figure 1) CW until the white dot U/D adjuster (Figure 1) on the U/D adjuster U/D adjuster (Figure 1) aligns with the white dot (Figure 1) on the U/D adjuster guard (Figure 1).
4. Turn the R/L Adjuster (Figure 1) marked to the natural stop.
5. Turn R/L Adjuster (Figure 1) CCW one and one-quarter ($1\frac{1}{4}$) turn.
6. Turn R/L Adjuster (Figure 1) CW until the white dot on the R/L Adjuster (Figure 1) aligns with the white dot (Figure 1) on the R/L Adjuster Guard (Figure 1)

BORESIGHT ADJUSTERS

The VIS POINT and the I/R POINT are adjusted using the same adjusters (Figure 2). Boresighting/zeroing the VIS POINT will align the I/R POINT and vice versa. For improved accuracy, always align the primary laser expected to be used on the mission.

When boresighting/zeroing the I/R ILLUM always boresight/zero the I/R POINT to the weapon first, then align the I/R ILLUM so that it is centered on the I/R POINT.

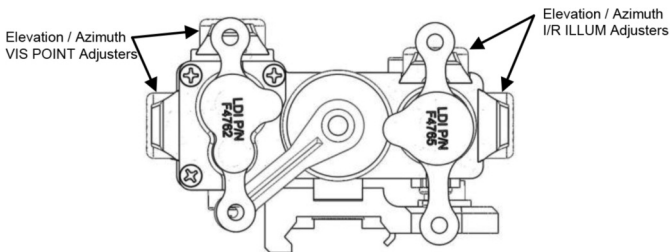


Figure 2. Boresight Adjusters for Aiming and Illumination Beams

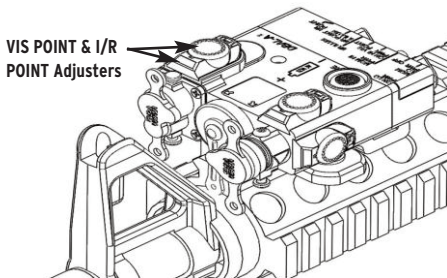


Figure 3. VIS POINT and I/R POINT Adjusters (Top Mounted)

Table 1. Adjuster Rotation and Shot Group Movement for the VIS POINT and I/R POINT (Top Mounted).

Adjuster	Rotation	Shot Group Movement
Top Adjuster Elevation (Guard marked U/D)	CW	Up
	CCW	Down
Side Adjuster Azimuth (Guard marked R/L)	CW	Right
	CCW	Left

When adjusting in a CCW direction, apply a positive load to the adjuster by turning an additional 1/4 turn (8 clicks) CCW, then make the final boresighting/zeroing adjustments by turning the adjusters in a CW direction. No positive load is required when adjustments are made in the CW direction.

AIM LASER ADJUSTERS

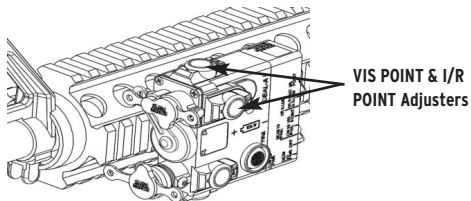


Figure 4. VIS POINT and I/R POINT Adjusters (Left Side Mounted)

Table 2. Adjuster Rotation and Shot Group Movement for the VIS POINT and I/R POINT (Left Side Mounted).

Adjuster	Rotation	Shot Group Movement
Side Adjuster Azimuth (Guard marked U/D)	CW CCW	Right Left
Side Adjuster Azimuth (Guard marked R/L)	CW CCW	Up Down

When adjusting in a CCW direction, apply a positive load to the adjuster by turning an additional 1/4 turn (8 clicks) CCW, then make the final boresighting/zeroing adjustments by turning the adjusters in a CW direction. No positive load is required when adjustments are made in the CW direction.

AIM LASER ADJUSTERS

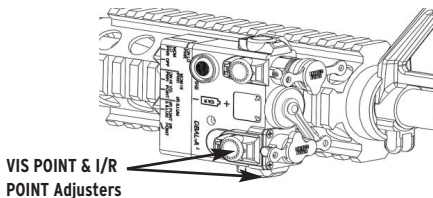


Figure 5. VIS POINT and I/R POINT Adjusters (Right Side Mounted)

Table 3. Adjuster Rotation and Shot Group Movement for VIS POINT and I/R POINT (Right Side Mounted).

Adjuster	Rotation	Shot Group Movement
Side Adjuster Azimuth (Guard marked U/D)	CW CCW	Right Left
Bottom Adjuster Elevation (Guard marked R/L)	CW CCW	Up Down

When adjusting in a CCW direction, apply a positive load to the adjuster by turning an additional 1/4 turn (8 clicks) CCW, then make the final boresighting/zeroing adjustments by turning the adjusters in a CW direction. No positive load is required when adjustments are made in the CW direction.

I/R ILLUM ADJUSTERS

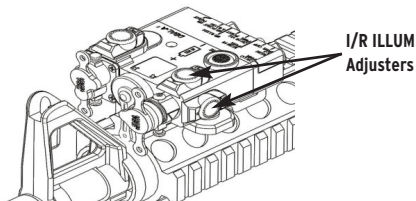


Figure 6. I/R ILLUM Adjusters (Top Mounted)

Table 4. Adjuster Rotation and Illumination Area Movement for the I/R ILLUM (Top Mounted).

Adjuster	Rotation	Shot Group Movement
Top Adjuster Elevation (Guard marked U/D)	CW	Up
	CCW	Down
Side Adjuster Azimuth (Guard marked L/R)	CW	Right
	CCW	Left

When adjusting in a CCW direction, apply a positive load to the adjuster by turning an additional 1/4 turn (8 clicks) CCW, then make the final boresighting/zeroing adjustments by turning the adjusters in a CW direction. No positive load is required when adjustments are made in the CW direction.

I/R ILLUM ADJUSTERS

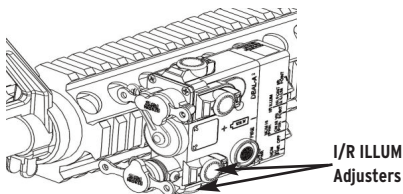


Figure 7. I/R ILLUM Adjusters (Left Side Mounted)

Table 5. Adjuster Rotation and Illumination Area Movement for the I/R ILLUM (Left Side Mounted).

Adjuster	Rotation	Shot Group Movement
Bottom Adjuster Elevation (Guard marked L/R)	CW	Up
	CCW	Down
Side Adjuster Azimuth (Guard marked U/D)	CW	Right
	CCW	Left

When adjusting in a CCW direction, apply a positive load to the adjuster by turning an additional 1/4 turn (8 clicks) CCW, then make the final boresighting/zeroing adjustments by turning the adjusters in a CW direction. No positive load is required when adjustments are made in the CW direction.

I/R ILLUM ADJUSTERS

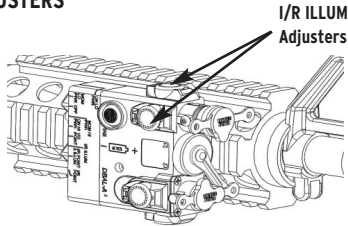


Figure 8. I/R ILLUM12 Adjusters (Right Side Mounted)

Table 6. Adjuster Rotation and Illumination Area Movement for the I/R ILLUM (Right Side Mounted).

Adjuster	Rotation	Shot Group Movement
Top Adjuster Elevation (Guard marked L/R)	CW CCW	Up Down
Side Adjuster Azimuth (Guard marked U/D)	CW CCW	Right Left

When adjusting in a CCW direction, apply a positive load to the adjuster by turning an additional 1/4 turn (8 clicks) CCW, then make the final boresighting/zeroing adjustments by turning the adjusters in a CW direction. No positive load is required when adjustments are made in the CW direction.

BORESIGHTING PROCEDURES

CAUTION

Do not force the adjusters beyond their end of travel. Forcing them will damage the adjusters or internal components. If operation of the adjusters becomes difficult, stop and refer the problem to the unit armorer. Failure to comply may result in damage to equipment.

NOTE

ALWAYS Boresight/Zero the AN/PEQ-15A starting with the Adjuster marked U/D. The AN/PEQ-15A may also be boresighted to the host weapon using an AN/PEM-1 Laser Borelight System (LBS). Table 7 provides 10m Target Offsets for this purpose. Refer to the latest version of the LBS Operator Manual (TM 9-5860-226-13&P) TM 10471-01/1A) for boresighting procedures. Once the AN/PEQ-15A / weapon combination is boresighted, apply a positive load to each adjuster by turning each one eight clicks (½ turn) CCW, then back (CW) to the boresight position. The following abbreviations and their definitions apply solely to the last two columns of Table 7:

L Left

R Right

U Up

D Down

VIS Visible Aim Laser IR

IR (Infrared) Aim Laser

Table 7. Mounting Configurations and Weapon Offsets

Weapon	Mount	Range Zeroed To	10m Boresight Target Offset Squares	25m M16A2/A4 Target Zero Offset Squares
M4/M16A4	Top Rail	300m	VIS 2.1R / 2.9U IR 2.1R / 3.2U	IR 2.1L / 0
M4/M16A4	Left Rail	300m	VIS 5L / 1.2U IR 5.5L / 1.2U	IR 5.0R / 2.0U
M4/M16A4	Right Rail	300m	VIS 4.4R / 3.6D IR 4.9R / 3.6D	IR 5.0L / 7.0U
M4/M16A4 w/M203	Top Rail	300m	VIS 2.2R / 3.7U IR 2.2R / 4.2U	IR 2.1L / 0
M4/M16A4 w/M203	Left Rail	300m	VIS 4.3L / 0.8U IR 4.8L / 0.8D	IR 4.8R / 3.0U
M4/M16A4 w/M203	Right Rail	300m	VIS 4.7R / 2.8D IR 5.2R / 2.8D	IR 5.0L / 7.0U
M249 Short Barrel	Feed Tray Cover (Top)	400m	VIS 1.2 / 6.0U IR 1.2L / 6.5U	IR 1.3L / 2U
M249 Short Barrel	Left Side Forward Rail	400m	VIS 8.4L / 2.4D IR 9.2L / 2.4D	IR 9.0R / 1.3U
M249 Short Barrel	Right Side Forward Rail	400m	VIS 4.3R / 7.5D IR 4.7R / 7.5D	IR 6.7L / 15.5D

Table 7. Mounting Configurations and Weapon Offsets

Weapon	Mount	Range Zeroed To	10m Boresight Target Offset Squares	25m M16A2/A4 Target Zero Offset Squares
M249	Feed Tray	400m	VIS 4.8R / 5.5U	IR 4.0L / 6.0U
Standard Barrel	Cover (Top)		IR 4.8R / 6.2U	
M249	Left Side	400m	VIS 4.4L / 4.8D	IR 6.7R / 9.7U
Standard Barrel	Forward Rail		IR 5.3L / 1.8D	
M249	Right Side	400m	VIS 5.7R / 7.4D	IR 6.7L / 13.9U
Standard Barrel	Forward Rail		IR 6.7R / 7.4D	
M240B	Feed Tray	500m	VIS 2.0R / 3.8U	IR 2.1L / 5.1U
	Cover (Top)		IR 2.0R / 4.5U	
M240B	Left Side	500m	VIS 6.0L / 3.5D	IR 2.1R / 5.1U
	Forward Rail		IR 6.5L / 3.5D	
M240B	Right Side	500m	VIS 6R / 7.8D	IR 6.8L / 16.8U
	Forward Rail		IR 6.9R / 7.8D	

Table 8. Mounting Configurations and Weapon Offsets (MK-19 and M2)

MK-19 MOD III 500M Zero (Large NVL Quadrant) NSN 5340-01-434-2231

Top Rail (slot 4)	Mechanical	Validated	Mounted Difference
10M IR Laser	19.5 cm R / 26.6 cm D	20.5 cm R / 33 cm D	N/A
10M VIS Laser	19.5 cm R / 27.6 cm D	20.6 cm R / 33.8 cm D	
Right Side Rail (slot 4)	Mechanical	Validated	Mounted Difference
10M IR Laser	23.6 cm R / 35.9 cm D	24.8 cm R / 42.5 cm D	N/A
10M VIS Laser	22.6 cm R / 35.9 cm D	23.8 cm R / 42.5 cm D	

Picatinny Adjustable Sight Bracket NSN 1240-01-515-3767

Right Rail (slot 8)	Mechanical	Validated	Mounted Difference
10M IR Laser	13.9 cm R / 33.4 cm D	14.5 cm R / 43.4 cm D	N/A
10M VIS Laser	12.9 cm R / 33.4 cm D	13.9 cm R / 43.4 cm D	

M2 500M Zero M2 Bracket (2 position Near/Far) NSN 5340-01-502-7233

Top Rail (slot 4)	Mechanical	Validated	Mounted Difference
10M IR Laser	2.1 cm R / 12.4 cm U	2.1 cm R / 13.4 cm U	N/A
10M VIS Laser	2.1 cm R / 11.4 cm U	2.1 cm R / 12.4 cm U	
25M IR Laser	2.1 cm L / 7.9 cm D	1.1 cm L / 8.0 cm D	
25M VIS Laser	2.1 cm L / 6.9 cm D	1.1 cm L / 7.0 cm D	

Table 8. Mounting Configurations and Weapon Offsets (MK-19 and M2)

M2 500M Zero M2 Bracket (2 position Near/Far) NSN 5340-01-502-7233

Top Rail (slot 4)	Mechanical	Validated	Mounted Difference
10M IR Laser	2.1 cm R / 12.4 cm U	2.1 cm R / 13.4 cm U	N/A
10M VIS Laser	2.1 cm R / 11.4 cm U	2.1 cm R / 12.4 cm U	
25M IR Laser	2.1 cm L / 7.9 cm D	1.1 cm L / 8.0 cm D	
25M VIS Laser	2.1 cm L / 6.9 cm D	1.1 cm L / 7.0 cm D	
Right Side Rail (slot 5)	Mechanical	Validated	Mounted Difference
10M IR Laser	10.3 cm R / 6.2 cm U	9.9 cm R / 7.8 cm U	N/A
10M VIS Laser	9.3 cm R / 6.2 cm U	9.1 cm R / 7.8 cm U	
25M IR Laser	10.3 cm L / 1.7 cm D	9.5 cm L / 2.7 cm D	
25M VIS Laser	9.3 cm L / 1.7 cm D	8.5 cm L / 2.7 cm D	

ZEROING ON 25-METER RANGE

NOTE

- At the maximum CW or CCW travel the AN/PEQ-15A lasers may not move a full 1cm per click, or may jump squares on the target. If this happens the AN/PEQ-15A should be returned to its factory neutral preset.
- U.S. Army to cut a 3cm square from the center of the “E” silhouette or 25 meter zeroing target.
- When the adjuster is at its maximum CW or CCW point of travel and is turned in the opposite direction the laser point may trace a small loop on the target. This is normal and does not indicate a failure condition. A positive load is required on the adjustment mechanism when boresighting/zeroing the AN/PEQ-15A for purposes of retaining the set alignment.

After establishing the factory preset or boresighting the AN/PEQ-15A / weapon combination, the AN/PEQ-15A may be zeroed to the weapon via live fire at a 25-meter range. Table 7 provides target offsets that must be applied to the 25-meter zeroing target. Refer to Tables 1 through 6 for adjuster rotation and resultant direction of shot group movement and beam movement.

1. On a 25-meter zeroing target, mark the designated strike point and designated strike zone for the weapon you are using (see Table 7).
2. Mount the target on an "E" silhouette or other suitable surface at 25 meters.
3. Mount the AN/PEQ-15A to the weapon as described in WP 0005, MOUNTING PROCEDURES and set to factory neutral preset.
4. Activate the aiming laser to be zeroed by rotating the Laser Mode Selector Switch (WP 0006, Figure 2).
5. Rotate the Activation Mode Selector Switch (WP 0006, Figure 1) to the ON position and aim center mass of the target until the aiming laser disappears through the 3 cm cut out.
6. Fire a 3-round shot group and note the center of the shot group relative to the designated strike point.
7. Adjust the Aiming Beam Adjusters (Figures 3,4, or 5) to move the center of the shot group to the designated strike point, applying a positive load to the adjusters apply a positive load to the adjuster by turning an additional 1/4 turn (8 clicks) CCW, then make the final boresighting/zeroing adjustments by turning the adjusters in a CW direction.
8. Repeat steps 6 and 7 until the shot group falls within the strike zone.
9. For all weapons except the M249, when 5 out of 6 consecutive rounds are in the designated strike zone, the AN/PEQ-15A / weapon combination is zeroed.

For the M249, the AN/PEQ-15A / weapon combination is zeroed when 5 out of 12 non-consecutive rounds are within a 6cm square.

10. Once the I/R POINT laser is zeroed, rotate the Laser Mode Selector Switch (WP 0006, Figure 2) to select the I/R POINT & ILLUM position and rotate the Activation Mode Selector Switch (WP 0006, Figure 1) to select the ON setting.
11. Use a NVD center the I/R ILLUM on the I/R aiming laser while aiming the weapon down range. If necessary, adjust the focus the I/R ILLUM so that it can be seen down range.

OPERATION UNDER UNUSUAL CONDITIONS

UNUSUAL ENVIRONMENT / WEATHER

The AN/PEQ-15A is a militarized device designed to withstand extreme changes in temperature and atmospheric pressure.

Extreme Cold

The AN/PEQ-15A may exhibit degradation of performance or failure to operate in temperatures below -34.6°F (-37°C) or in storage of -70.6°F (-57°C). To maximize performance in cold temperatures, minimize AN/PEQ-15A exposure time.

Extreme Heat

The AN/PEQ-15A is capable of operating in temperatures up to 124°F (51°C) and a storage temperature of 159.8°F (71°C).

Dust Storms and Sand Storms

Blowing sand and dust has the potential to damage the optical surfaces of the AN/PEQ-15A. The VIS POINT, I/R POINT, and I/R ILLUM Exit Port Covers should be installed under these conditions to protect the lens surfaces.

Conditions of Limited Visibility

Limited visibility due to rain, snow, blowing sand and dust, fog, and smoke or other obscurants can make successful laser operations difficult. Under these conditions, visible aim points may be more difficult to see.

Nuclear, Biological and Chemical (NBC) Decontamination

Standard decontaminants recommended in Field Manual (FM) 3-5 (Reference 4) such as DS2 and STB should not be used to decontaminate the AN/PEQ-15A. The AN/PEQ-15A and its associated weapon can be decontaminated simultaneously with Decontamination Kit M295 or Sorbent Decontamination System M100 Kit. The AN/PEQ-15A can be operated by personnel in Mission-Oriented Protective Posture, Level 5 (MOPP4) protective equipment including both the Chemical Protective Over Garment (CPOG) and Joint Service Lightweight Integrated Suit Technology (JSLIST) configurations.

TEMPORARY STORAGE

When not in use, the AN/PEQ-15A shall be stowed as follows:

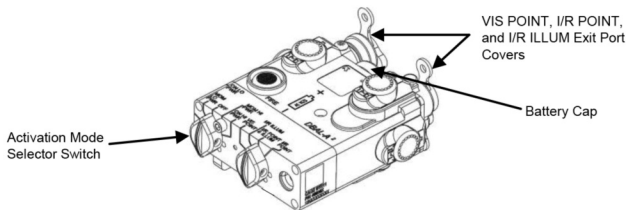


Figure 1. AN/PEQ-15A Temporary Storage

1. Turn the Activation Mode Selector Switch (Figure 1) to the 0 (OFF) position.
2. Remove battery by unscrewing the Battery Cap (Figure 1) counter clockwise and tilt the AN/PEQ-15A to where the battery (WP 0005, Figure 1) falls out.
3. Replace Battery Cap (Figure 1) by turning clockwise until finger tight.
4. Install the VIS POINT, I/R POINT, and I/R ILLUM Exit Port Covers (Figure 1) over the Laser exit ports.
5. Place the AN/PEQ-15A and all ancillary equipment (e.g., Pattern Generators, Remote Cable Switch, etc.) in the Soft Carrying Case WP 0002, Table 2.

CHAPTER 3 – TROUBLESHOOTING PROCEDURES

CREW TROUBLESHOOTING PROCEDURES

INTRODUCTION

The procedures contained in Table 1 will help the Crew correct some of the basic problems that may arise with the AN/PEQ-15A. If the equipment malfunction is not listed or the actions listed do not correct the fault, turn the unit and all items listed in WP 0011, Figure 1, to Maintainer Maintenance.

Table 1. Crew Troubleshooting Procedures

SYMPTOM	MALFUNCTION	CORRECTIVE ACTION
NOTE AN/PEQ-15A will not operate if the Rotary Switch is not precisely aligned.		
1. Lasers not visible or fail to come on when activated.	a. Activation switch is in the OFF position.	a. Turn Activation Switch to the desired mode of operation. (ON LO PWR, MOM LO PWR, OFF, MOM HI PWR, ON HI PWR.) (WP 0004 and WP 0008)
	b. VIS POINT, I/R POINT, and I/R ILLUM Exit Port Covers are installed over laser ports c. VIS POINT, I/R POINT, and I/R ILLUM Exit Port Lenses are obscured by Mud/dirt. d. Battery Cap is not secure. e. Battery cap/threads are damaged. f. Battery compartment corroded. g. Battery contact spring in the battery compartment is damaged or Corroded. h. Battery capacity depleted.	b. Remove VIS POINT, I/R POINT, and I/R ILLUM Exit Port Covers. (WP 0014 and WP 0008) c. Clean VIS POINT, I/R POINT, and I/R ILLUM Exit Port Lenses. (WP 0016) d. Tighten battery cap. (WP 0014) e. Send to next higher level maintenance. f. Clean Battery Compartment. (WP 0016) g. Send to next higher level maintenance. h. Replace battery with new battery. (WP 0014)

Table 1. Crew Troubleshooting Procedures

SYMPTOM	MALFUNCTION	CORRECTIVE ACTION
1. Lasers not visible or fail to come on when activated.	i. Possible Internal failure.	i. Send to next higher level maintenance.
2. Lasers appear weak.	a. Exit Port Lens is obscured by mud/dirt.	a. Clean VIS POINT, I/R POINT, and I/R ILLUM Exit Port Lenses. (WP 0016)
	b. Battery is not properly installed.	b. Ensure battery is properly installed. (WP 0014)
	c. VIS POINT, I/R POINT, and I/R ILLUM Exit Port Lenses have 50% scratch damage/pitted.	c. Send to next higher level maintenance.
	d. Battery capacity depleted.	d. Replace battery with new battery. (WP 0014)
	e. Battery compartment corroded.	e. Clean Battery Compartment. (WP 0016)
3. Low Battery Indicator LED remains on when new battery is installed.	a. Battery compartment corroded.	a. Clean Battery Compartment. (WP 0016)
	b. Battery Cap Contact corroded.	b. Clean Battery Cap contact. (WP 0016)
	c. Battery Cap and Housing Threads contamination.	c. Clean Battery Cap and Housing Threads. (WP 0016)

Table 1. Crew Troubleshooting Procedures

SYMPTOM	MALFUNCTION	CORRECTIVE ACTION
4. Remote Cable Switch inoperable	a. Remote Cable is not fully seated. b. Remote Cable Port is clogged with mud/dirt. c. Remote Cable Plug contacts corroded. d. Remote Cable Switch inoperable.	a. Reconnect plug. (WP 0016) b. Flush with water. (WP 0016) c. Clean Remote Cable Plug contacts. (WP 0016) d. Send to next higher level maintenance.
5. Aim Lasers cannot be zeroed to the weapon.	a. Mounting procedures are not being followed properly. b. Zero preset is not properly established. c. Throw Lever Mount damaged. d. AN/PEQ-15A is not properly secured to Throw Lever Mount.	a. Ensure proper mounting procedures are being followed. (WP 0005) b. Ensure proper establishment of zero preset. (WP 0007) c. Send to next higher level maintenance. d. Send to next higher level maintenance.
6. I/R POINT, and I/R ILLUM Optical Instrument Reticle (Pattern Generators) patterns are blurry or unrecognizable.	a. I/R ILLUM Focus Knob not focused b. I/R POINT, and I/R ILLUM Optical Instrument Recticles (Pattern Generators) are damaged.	a. Turn I/R ILLUM Focus Knob until image is acceptable. (WP 0007 and WP 0014) b. Replace I/R POINT, and I/R ILLUM Optical Instrument Recticles (Pattern Generators) are damaged. (WP 0019)

Table 1. Crew Troubleshooting Procedures

SYMPTOM	MALFUNCTION	CORRECTIVE ACTION
	c. I/R POINT, and I/R ILLUM Optical Instrument Recticle (Pattern Generator) Retaining Straps are worn out.	c. Replace I/R POINT, and I/R ILLUM Optical Instrument Recticle (Pattern Generator) Retaining Straps. (WP 0019)
7. AN/PEQ-15A cannot be mounted to the weapon.	a. Weapon is not equipped with a MIL-STD-1913 rail. b. Mounting procedures are not being followed properly. c. Dirt or debris on Throw Lever Mount.	a. Ensure weapon is equipped with a MIL-STD-1913 rail. (WP 0007) b. Ensure proper mounting procedures are being followed. (WP 0005 and WP 0007) c. Remove dirt or debris from Throw Lever Mount. (WP 0005)
8. Battery Cap Retaining unusable.	a. Battery Cap Retaining Strap damaged.	a. Replace Battery Cap Strap Retaining Strap. (WP 0014)
9. VIS POINT, I/R POINT, and I/R ILLUM Exit Port Cover unusable.	a. VIS POINT, I/R POINT, and I/R ILLUM Exit Port Cover damaged or severely worn out.	a. Replace VIS POINT, I/R POINT, and I/R ILLUM Exit Port Cover. (WP 0019)

FIELD TROUBLESHOOTING PROCEDURES

INTRODUCTION

The procedures contained in Table 1 will help the Maintainer correct some of the basic problems that may arise with the AN/PEQ-15A. If the equipment malfunction is not listed, or the actions listed do not correct the fault, see Warranty and Non-Warranty information contained in WP 0001.

Table 1. Field Troubleshooting Procedures

SYMPTOM	MALFUNCTION	CORRECTIVE ACTION
NOTE		
AN/PEQ-15A will not operate if the Rotary Switch is not precisely aligned.		
Safety Screw will not install.	a. Safety Screw is missing	- Replace Safety Screw. (WP 0015)
	b. Safety Screw Threads are damaged.	- Replace Safety Screw.) (WP 0015

CHAPTER 4 – MAINTENANCE INSTRUCTIONS

INSTALLATION INSTRUCTIONS

No special installation instructions are required for maintenance of the AN/PEQ-15A.

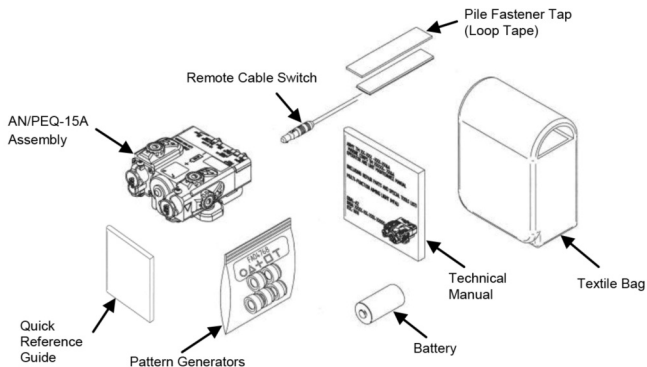


Figure 1. AN/PEQ-15A Service Upon Receipt

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

PMCS INTRODUCTION

The Preventative Maintenance Checks and Services (PMCS) table (WP 0013, Table 1) provides easy access to the schedule of checks and services for the AN/PEQ-15A. Service intervals are periods of time within which the equipment must be checked and serviced to maintain full operation and reduce failures.

Warnings and Cautions:

Always observe the WARNINGS and CAUTIONS appearing in your PMCS table. Warnings and cautions appear before applicable procedures. You must observe the warnings and cautions to prevent serious injury to yourself and others or to prevent your equipment from being damaged.

EXPLANATION OF TABLE ENTRIES

Item Number Column: Numbers in this column are for reference only. Do PMCS for the intervals listed in the sequence described in accordance with DA PAM 750-8, Army Maintenance Management Systems (TAAMS) Users Manual.

Interval: This column tells you when you must do the procedure in the procedure column. Be sure to complete the appropriate maintenance forms whether a check, test, or service is performed. If the system is going to be stored, the battery shall be removed. There are three (3) intervals listed: Before (B), During (D), and After (A).

Item to Be Checked or Serviced: This column provides the location and the item to be checked or serviced.

Procedure: This column gives the procedure you must do to check or service the item listed in the Check/Service column to know if the equipment is ready or available for its intended mission or for operation. You must do the procedure at the time stated in the interval column. No scheduled maintenance is required by dedicated maintenance level maintainers.

NOTE

Damaged accessory items do not cause the entire end item to be “not fully mission capable”. However, the damaged item should be replaced as soon as practical to restore full capability of the AN/PEQ-15A.

Equipment Not Ready/Available If: Information in this column tells you what faults will keep your equipment from being capable of performing its primary mission. If you perform check and service procedures that show faults listed in this column, do not operate the equipment. Follow standing operating procedures for maintaining the equipment or reporting equipment failure.

Table 1. Preventive Maintenance Checks and Services

Item No.	Interval	Item to Check/Service	Procedure	Not Fully Mission Capable If:
1	B/A	Major Components	Verify that all major components are present (WP 0025).	Any major components are missing or damaged.
2	B/A	AN/PEQ-15A Exterior	a. As needed, clean AN/PEQ-15A housing around buttons, switches, adjusters, and attachment points (WP 0016). b. As needed, clean laser ports and all lenses (WP 0016). Inspect laser ports and lens for cracks, scratches, or pitting. c. Inspect housing for cracks or missing pieces.	a. N/A b. Laser ports and/or lenses are cracked, scratched, pitted, or cannot be cleaned. c. Housing cracked or missing pieces.
WARNING				
Visible and Invisible Laser Radiation: Do not stare directly into infrared light beam. Failure to comply may result in permanent eye damage. If injury occurs, seek immediate medical attention.				
			d. Inspect exit port covers, retaining strap for tears, rips, and for snug fit when in place over exit ports.	d. N/A

Table 1. Preventive Maintenance Checks and Services

Item		Item to		Not Fully Mission
No.	Interval	Check/Service	Procedure	Capable If:
3	B/A	Battery Cap and O-ring	a. Inspect O-ring. Clean, lubricate and/or replace as necessary per (WP 0016). b. Inspect Battery Cap for damage.	a. N/A b. Battery Cap threads are bent or scratched.
4	B/A	Remote Jack	Remove Remote Jack Plug and inspect Jack for corrosion, dirt or damage.	N/A
5	B/D/A	Throw Lever Mount	a. Inspect for damage or missing parts to Throw Lever Mount. b. Ensure the Throw Lever Mount is properly secured to the rail and tightened (WP 0005). c. Mount AN/PEQ-15A onto weapon (WP 0005). d. Inspect rail buffer, crossbar, and mount base for dirt and corrosion. Clean as necessary (WP 0016).	a. Throw Lever Mount is damaged or missing parts. b. Throw Lever Mount cannot be properly secured to the rail. c. AN/PEQ-15A cannot mount to weapon. d. N/A

WARNING

Be sure the Activation Mode Selector Switch is in the OFF position prior to installing battery. Prior to performing PMCS Item 6, install AN/PEQ-15A battery IAW WP 0005.

Table 1. Preventive Maintenance Checks and Services

Item No.	Interval	Item to Check/Service	Procedure	Not Fully Mission Capable If:
6	B/A	AN/PEQ-15A Operation	a. Select and activate each mode of operation. (WP 0006). and then operate the Activation Mode Selector Switch using the ON LOW PWR/MOM LOW PWR. b. Verify that the Safety Screw is installed in the Lockout Position for Training activities. (AL / DL modes only). c. Install and activate Remote Cable Switch. (WP 0006).	a. Visible Aim Laser not visible. Using night vision devices, IR Aim Laser and/or IR Illuminator not visible. b. If Safety Screw is missing, do not use for training activities. c. Remote Cable Switch is not functioning properly or is damaged.

OPERATOR / CREW REMOVAL / REPLACEMENT PROCEDURES

OPERATOR / CREW REPLACEMENT

The Operator / Crew maintenance is limited to the following tasks:

- Battery Replacement
- Battery Cap Replacement
- Battery Cap Retaining Strap Replacement
- Battery Cap O-Ring Replacement
- Pattern Generators
- VIS POINT, I/R POINT, and I/R ILLUM Exit Port Covers Replacement

WARNING

Ensure the Mode Selector Switch is turned to the 0 (OFF) position and lens cover and safety screws are in place before attempting to install, remove, or replace batteries. Failure to comply may lead to laser radiation exposure possibly resulting in permanent eye and/or skin damage. In case of eye and/or skin damage, seek immediate medical attention.

Removal

1. Unscrew Battery Cap (Figure 1) by turning counter clockwise.
2. Remove used batteries (Figure 1) and dispose in accordance with local procedures.

Replace

NOTE

Proper battery orientation is clearly marked on the AN/PEQ-15A housing. Insert new Battery (Figure 1) and replace and tighten the Battery Cap (Figure 1) by turning clockwise.

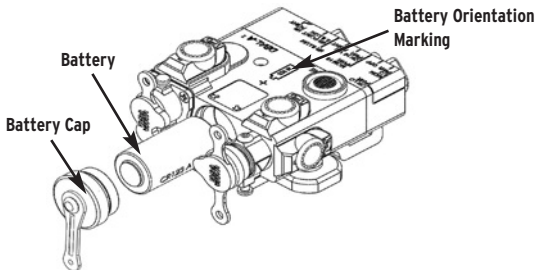


Figure 1. Battery Replacement

BATTERY CAP REPLACEMENT

Removal

1. Unscrew Battery Cap (Figure 2) by turning counter clockwise.
2. Pull Battery Cap Retaining Strap (Figure 2) off over the Battery Cap Retaining Stud (Figure 2) located on the Battery Cap (Figure 2).

Replace

1. Stretch the end of the Battery Cap Retaining Strap (Figure 2) over the Battery Cap Retaining Stud (Figure 2) located on the Battery Cap (Figure 2).
2. Replace Battery Cap (Figure 2) by turning clockwise to tighten.

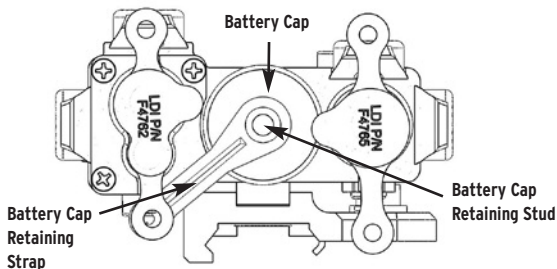


Figure 2. Battery Cap Replacement

BATTERY CAP RETAINING STRAP REPLACEMENT

NOTE

Install the Battery Cap Retaining Strap below the Exit Port Cover Retaining Strap used on the Visible Point Laser. If necessary, remove the bottom Exit Port Cover Strap Stud from the Visible Point Laser Exit Port Cover then install the Battery Cap Retaining Strap.

Removal

1. Unscrew Battery Cap (Figure 3) by turning counter clockwise.
2. Pull Battery Cap Retaining Strap (Figure 3) off over the Battery Cap Retaining Stud (Figure 3) on the Battery Cap (Figure 3).
3. Pull the other side of the Battery Cap Retaining Strap (Figure 3) off over the Exit Port Cover Strap Stud (Figure 3) below the Visible Point Laser (Figure 3).

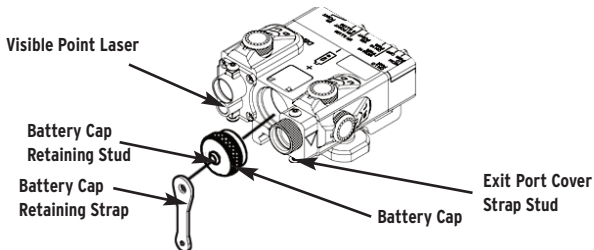


Figure 3. Battery Cap Retaining Strap Replacement

Replacement

1. Stretch one end of the Battery Cap Retaining Strap (Figure 3) over the Exit Port Cover Strap Stud (Figure 3) below the Visible Point Laser (Figure 3).
2. Stretch the other end of the Battery Cap Retaining Strap (Figure 3) over the Battery Cap Retaining Stud (Figure 3) on the Battery Cap (Figure 3).
3. Replace Battery Cap (Figure 3) and turn clockwise to tighten.

BATTERY CAP O-RING REPLACEMENT

Removal

1. Unscrew Battery Cap (Figure 4) by turning counter clockwise.
2. Use the fingers of one hand to squeeze the Battery Cap O-Ring (Figure 4) while simultaneously pushing it out of the Battery Cap O-Ring Retaining Groove (Figure 4). Grasp the Battery Cap O-Ring (Figure 4) with fingers of the other hand and pull it off the battery compartment threads.
3. Use a disposable applicator to clean the Battery Cap O-Ring Retaining Groove (Figure 4) of any dirt, grease, or debris.

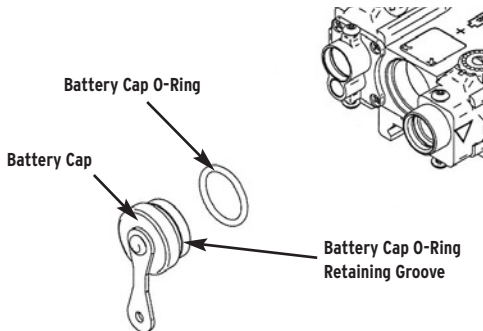


Figure 4. Battery Cap O-Ring Replacement

Replacement

WARNING

Do not use chemicals in an enclosed area. Ensure work area is well ventilated. Inhaling chemical vapors may lead to respiratory issues. In case of exposure, seek immediate medical attention.

1. Stretch the Battery Cap O-Ring (Figure 4) over the battery compartment threads and slip it into the Battery Cap O-Ring Retaining Groove (Figure 4).
2. Replace the Battery Cap (Figure 4) and turn clockwise to tighten.

PATTERN GENERATORS REPLACEMENT

Removal

Pull out Pattern Generators (Figure 5) from I/R POINT (Figure 5) or focused I/R ILLUM (Figure 5) with fingers to remove pattern generators (Figure 5).

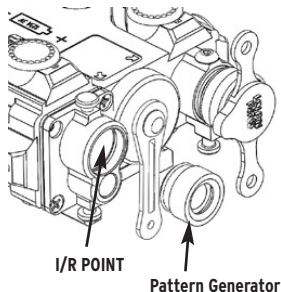
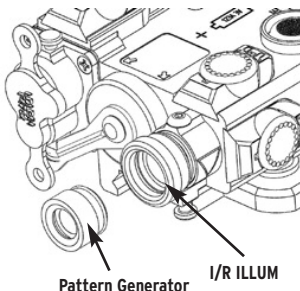


Figure 5. Replacing Pattern Generators

Replacement

Insert plug shaped side of the Pattern Generator (Figure 5) into the I/R POINT (Figure 5) or focused I/R ILLUM (Figure 5) and press firmly into place.

VIS POINT, I/R POINT, and I/R ILLUM Exit Port Covers REPLACEMENT

Removal

Pull off VIS POINT, I/R POINT, and I/R ILLUM Exit Port Covers (Figure 6) from the attachment points (Figure 6).

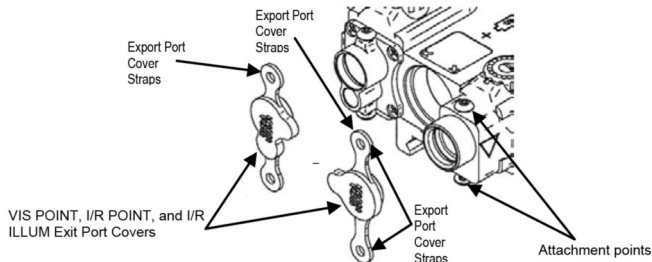


Figure 6. VIS POINT, I/R POINT, and I/R ILLUM Exit Port Covers Replacement

Replacement

Stretch the open ends of Exit Port Cover Straps (Figure 6) over the attachment points (Figure 6) and over the Laser exit ports so that it fits snug and firmly in place.

MAINTAINER

REMOVAL / REPLACEMENT PROCEDURES

The Maintainer maintenance is limited to the following tasks:

- Safety Screw Replacement

Removal

Remove Safety Screw (Figure 1) from Lockout Position by using a 3/32 inch hex head wrench and turning counter clockwise.

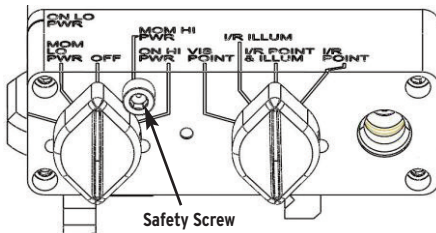


Figure 1. Safety Screw Replacement

Replacement

Install replacement Safety Screw (Figure 1) in the Lockout Position by using a 3/32 inch hex head wrench and turning clockwise.

CLEANING

WARNING

Failure to comply with the warnings below could lead to chemical inhalation and skin irritation. If exposed, seek immediate medical attention.

- Isopropyl alcohol can affect you when inhaled and by passing through your skin.
- Contact can irritate and burn the skin and eyes. Repeated skin exposure can cause itching, redness, rash, drying, and cracking.
- Inhaling isopropyl alcohol can irritate the nose and throat.
- Overexposure can cause headache, drowsiness, confusion, loss of coordination, unconsciousness, and death.
- Isopropyl alcohol may affect the liver and kidneys.
- Isopropyl alcohol is a flammable liquid and a fire hazard.

AN/PEQ-15A HOUSING

Rinse thoroughly with fresh water or mild soap and water and then dry with a wiping rag. If necessary, clean around switches, adjusters, buttons, and rail grabber bracket using a disposable applicator.

LENS CLEANING

1. Remove Pattern Generator (Figure 1) (if used) or VIS POINT, I/R POINT, and I/R ILLUM Exit Port Covers (Figure 1) IAW WP 0014.
2. Using a dry lens cleaning tissue, brush off all loose dirt from the lenses (Figure 1). Excessive force may result in scratching the lenses (Figure 1).
3. Soak a folded lens cleaning tissue with lens cleaning compound and lightly wipe the lens (Figure 1) slowly. Wipe in a circular motion beginning in the center of the lens (Figure 1) and ending at the edge. After one circular stroke, discard the tissue. Repeat this procedure until the lens (Figure 1) surface is clean.

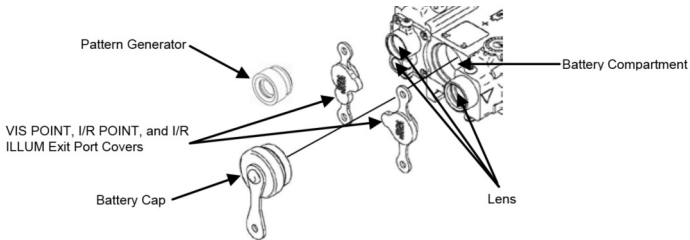


Figure 1. Lens Cleaning

BATTERY CAP / COMPARTMENT AND CONTACTS

1. Remove Battery IAW WP 0014, Battery Replacement.
2. Inspect the Battery Compartment (Figure 1) for dirt, dust and corrosion. Dirt or debris that cannot be shaken loose from the Battery Compartment (Figure 1) may be removed using a wiping rag or disposable applicator.
3. Clean the threaded portions of the Battery Cap (Figure 1) and Battery Compartment (Figure 1) using a wiping rag. If necessary, use a disposable applicator dipped in isopropyl alcohol to gently clean the battery contacts on the inside of the Battery Cap (Figure 1).
4. Reinstall Battery Cap (Figure 1) by turning clockwise to tighten.

REMOTE JACK CONTACTS

1. Remove Remote Cable Switch (Figure 2) or Remote Jack Plug (Figure 2) if installed.
2. Inspect Remote Jack Plug (Figure 2) contacts for corrosion.
3. If necessary, use a disposable applicator dipped in isopropyl alcohol to gently clean the contacts.
4. If necessary, flush Remote Jack Plug (Figure 2) with water to dislodge caked mud and dirt. .
5. Reinstall Remote Cable Switch (Figure 2) or Remote Jack Plug if necessary.

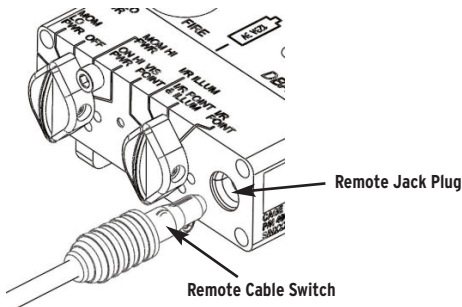


Figure 2. Remote Jack Contacts

PREPARATION FOR STORAGE OR SHIPMENT

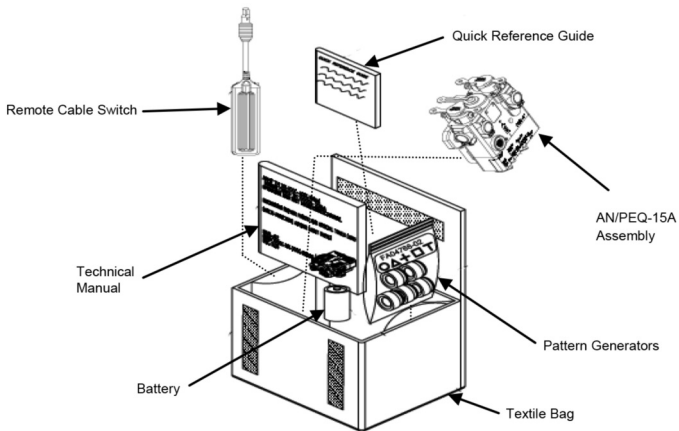


Figure 1. Preparation for Storage and Shipment

STORAGE AND SHIPPING

1. Ensure the AN/PEQ-15A is turned off.

CAUTION

When storing or shipping the AN/PEQ-15A ensure battery is removed. Failure to comply may result in damage to equipment.

2. Remove the Batteries (WP 0014, Battery Removal) from the AN/PEQ-15A.
3. Close the Battery Cover (WP 0014, Battery Removal).
4. Clean the AN/PEQ-15A IAW (WP 0016) before storage or shipment to ensure that the AN/PEQ-15A is free of all contaminants such as dirt or any other foreign material.
5. Refer to Figure 1 for placement of the AN/PEQ-15A and COEI into the Textile Bag.

CHAPTER 5 – REPAIR PARTS AND SPECIAL TOOLS LIST INTRODUCTION

SCOPE

This RPSTL lists and authorizes spares and repair parts, special tools, special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of AN/PEQ-15A. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the Source, Maintenance, and Recoverability (SMR) codes.

GENERAL

In addition to the Introduction work package, this RPSTL is divided into the following work packages:

1. Repair Parts List Work Packages. Work packages containing lists of spare and repair parts authorized for use in the performance of maintenance at the levels determined by the MAC/SMR code. These work packages also include parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending Figure and item number sequence.

Sending units, brackets, filters, and bolts are listed with the component they mount on. Repair parts kits are listed separately in their own functional group and work package OR Repair parts kits are listed at the end of the individual work packages. Repair parts for repairable special tools are also listed in a separate work package. Items listed are shown on the associated illustrations.

2. Special Tools List Work Packages. This work package lists those special tools, special TMDE, and special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in the DESCRIPTION AND USABLE ON CODE (UOC) column). Tools that are components of common tool sets and/or Class VII are not listed.

3. Cross-Reference Indexes Work Packages. There are two cross-reference indexes work packages in this RPSTL: The National Stock Number (NSN) Index work package and the Part Number (P/N) index work package. The NSN work package refers you to the Figure and item number for each NSN listed in the RPSTL. The PN index work package refers you to the figure and item number for each part number listed in the RPSTL.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST WORK PACKAGE

ITEM NO (Column (1)). Indicates the number used to identify items called out in the illustration.

SMR CODE (Column (2)). The SMR code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout. This entry may be subdivided into 4 subentries, one for each service.

Table 1. SMR Code Explanation

SOURCE CODE XX	MAINTENANCE CODE XX		RECOVERABILITY CODE X
1st two positions	3rd position	4th position	5th position
How to get an item.	Who can install, replace, or use the item.	Who can do a complete repair* on the item.	Who determines disposition action on unserviceable items.

NOTE

*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

Source Code

The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow:

Source Code	Application/Explanation
-------------	-------------------------

PA	
----	--

PB	
----	--

PC	
----	--

Stock items; use the applicable NSN to requisition/request items with these source codes. They are authorized to the level indicated by the code entered in the 3rd position of the SMR Code.

PD	
----	--

PE	
----	--

PF	
----	--

PG	
----	--

PH	
----	--

NOTE

PR	
----	--

Items coded PC are subject to deterioration.
--

PZ	
----	--

KD	
----	--

Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the third position of the SMR code. The complete kit must be requisitioned and applied.

KF	
----	--

KB	
----	--

Source Code

MF - Made at maintainer class

MH - Made at below depot
sustainment class

ML - Made at SRA

MD - Made at Depot

MG - Navy Only

Application/Explanation

Items with these codes are not to be requisitioned/ requested individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the bulk material group work package of the RPSTL. If the item is authorized to you by the third position code of the SMR code, but the source code indicates it is made at higher level, order the item from higher level of maintenance.

AF - Assembled by maintainer
class

AH - Assembled by below depot
sustainment class

AL - Assembled by SRA

AD - Assembled by depot

AG - Navy only

Items with these codes are not to be requested/ requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the third position of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.

Source Code**Application/Explanation**

XA

Do not requisition an "XA" coded item. Order the next higher assembly. (Refer to NOTE below.)

XB

If an item is not available from salvage, order it using the CAGEC and part number.

XC

Installation drawings, diagrams, instruction sheets, field service drawings; identified by manufacturer's part number.

XD

Item is not stocked. Order a XD-coded item through local purchase or normal supply channels using the CAGEC and part number given, if no NSN is given.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes except for those items source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to use and repair support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

Third Position. The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to the following levels of maintenance:

Maintenance Code	Application/Explanation
C	Crew or operator maintenance done within unit/AVUM maintenance.
F	Maintainer maintenance can remove, replace, and use the item.
H	Below Depot Sustainment maintenance can remove, replace, and use the item.
L	Specialized repair activity designator can remove, replace, and use the item.
G	Afloat and ashore intermediate maintenance can remove, replace, and use the item (Navy only).

Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to use and repair support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

Third Position. The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to the following levels of maintenance:

Maintenance Code	Application/Explanation
-------------------------	--------------------------------

K	Contractor facility can remove, replace, and use the item.
---	--

Z	Item is not authorized to be removed, replace, or used at any maintenance level.
---	--

D	Depot can remove, replace, and use the item.
---	--

Fourth Position. The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (perform all authorized repair functions).

Maintenance Code	Application/Explanation
C	Crew (operator) is the lowest class that can do complete repair.
F	Field is the lowest level that can do complete repair of the item.
H	Below Depot Sustainment is the lowest level that can do complete repair of the item.
L	Specialized Repair Activity Designator is the lowest level that can do complete repair of the item.
D	Depot is the lowest level that can do complete repair of the item.
G	Both afloat and ashore intermediate levels are capable of complete repair of item (Navy only).
K	Complete repair is done at contractor facility.
Z	Non-repairable. No repair is authorized.
B	No repair is authorized. No parts or special tools are authorized for maintenance of "B" coded item. However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is shown in the fifth position of the SMR code as follows:

Recoverability Code	Application/Explanation
----------------------------	--------------------------------

Z	Non-repairable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR code.
F	Repairable item. When uneconomically repairable, condemn and dispose of the item at the field level.
H	Repairable item. When uneconomically repairable, condemn and dispose of the item at the below depot sustainment level.
D	Repairable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item are not authorized below depot level.
L	Repairable item. Condemnation and disposal not authorized below Specialized Repair Activity (SRA).

Recoverability Code	Application/Explanation
----------------------------	--------------------------------

A	Item requires special handling or condemnation procedures because of specific reasons (such as precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.
G	Field level repairable item. Condemn and dispose at either afloat or ashore intermediate level (Navy only). No repair is authorized. No parts or special tools are authorized for maintenance of "B" coded item. However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.
K	Repairable item. Condemnation and disposal to be performed at contractor facility.

NSN (Column (3)). The NSN for the item is listed in this column.

CAGEC (Column (4)). The Commercial and Government Entity Code (CAGEC) is a five-digit code which is used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.

PART NUMBER (Column (5)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When you use an NSN to requisition an item, the item you receive may have a different part number from the number listed.

DESCRIPTION AND USABLE ON CODE (UOC) (Column (6)). This column includes the following information:

1. The federal item name, and when required, a minimum description to identify the item.
2. Part numbers of bulk materials are referenced in this column in the line entry to be manufactured or fabricated.
3. Hardness Critical Item (HCI). A support item that provides the equipment with special protection from electromagnetic pulse (EMP) damage during a nuclear attack.
4. The statement END OF FIGURE appears just below the last item description in column (6) for a given figure in both the repair parts list and special tools list work packages.

QTY (Column (7)). The QTY (quantity per figure) column indicates the quantity of the item used in the breakout shown on the illustration/figure, which is prepared for a functional group, sub functional group, or an assembly. A "V" appearing in this column instead of a quantity indicates that the quantity is variable and quantity may change from application to application.

USMC QTY per Equip (Column (8)). This column indicates the total quantity of the item used on the equipment.

EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS

1. National Stock Number (NSN) Index Work Package. NSN's in this index are listed in National Item Identification Number (NIIN) sequence.

STOCK NUMBER Column. This column lists the NSN in NIIN sequence. The NIIN consists of the last nine digits of the NSN. When using this column to locate an item, ignore the first four digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

For example, if the NSN is 5385-01-574-1476, the NIIN is 01-574-1476.

FIG. Column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in the repair parts list and special tools list work packages.

ITEM Column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

2. Part Number (P/N) Index Work Package. Part numbers in this index are listed in ascending alphanumeric sequence (vertical arrangement of letter and number combinations which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

PART NUMBER Column. Indicates the part number assigned to the item.

FIG. Column. This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list work packages.

ITEM Column. The item number is the number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

SPECIAL INFORMATION

UOC. The UOC appears in the lower left corner of the Description Column heading. Usable on codes are shown as "UOC:" in the Description Column (justified left) on the first line under the applicable item/nomenclature. Uncoded items are applicable to all models. Identifications of the UOCs used in the RPSTL are:

Code	Used on
-------------	----------------

DBL	AN/PEQ-15A (Black)
-----	--------------------

GBL	AN/PEQ-15A (Green)
-----	--------------------

HOW TO LOCATE REPAIR PARTS

1. When NSNs or Part Numbers Are Not Known.

First, using the table of contents, determine the assembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and lists are divided into the same groups.

Second, find the figure covering the functional group or the sub functional group to which the item belongs.

Third, identify the item on the figure and note the number(s).

Fourth, look in the repair parts list work packages for the figure and item numbers. The NSNs and part numbers are on the same line as the associated item numbers.

2. When NSN Is Known.

First, if you have the NSN, look in the STOCK NUMBER column of the NSN index work package. The NSN is arranged in NIIN sequence. Note the figure and item number next to the NSN.

Second, turn to the figure and locate the item number. Verify that the item is the one you are looking for.

3. When Part Number Is Known.

First, if you have the part number and not the NSN, look in the PART NUMBER column of the part number index work package. Identify the figure and item number.

Second. Look up the item on the figure in the applicable repair parts list work package.

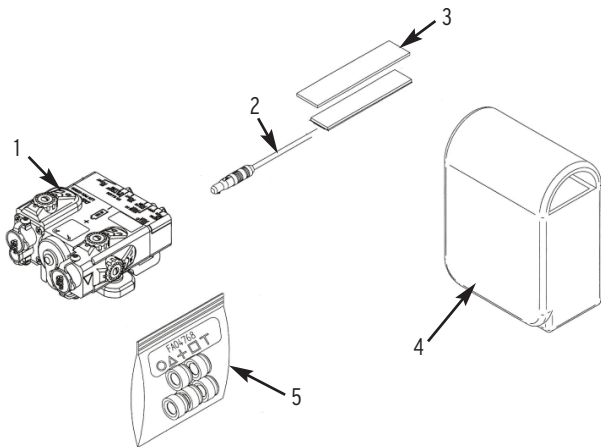


Figure 1. AN/PEQ-15A System

Table 1. Repair Parts List

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
					GROUP 00 FIG. 1. AN/PEQ-15A SYSTEM	
1	XACKK	N/A	OYR11	40090 40090F	AN/PEQ-15A ASSEMBLY (FIGURE 2 FOR PARTS BREAKDOWN)	1
2	PACZZ	6150-01-537-0495	OYR11	FA04631-7	Cable Assembly Switch, Electrical (Remote Cable Switch, 7")	1
3	PACZZ	8315-01-497-8154	OB107	ITP-044	Fastener Tape, Pile (Loop Tape)	1
4	PACZZ	8105-01-368-6253	80063	A3186949	Bag, Textile	1
5	PACZZ	1240-01-537-0496	OYR11	FA04768	Kit, Pattern Generators (set of 5)	1

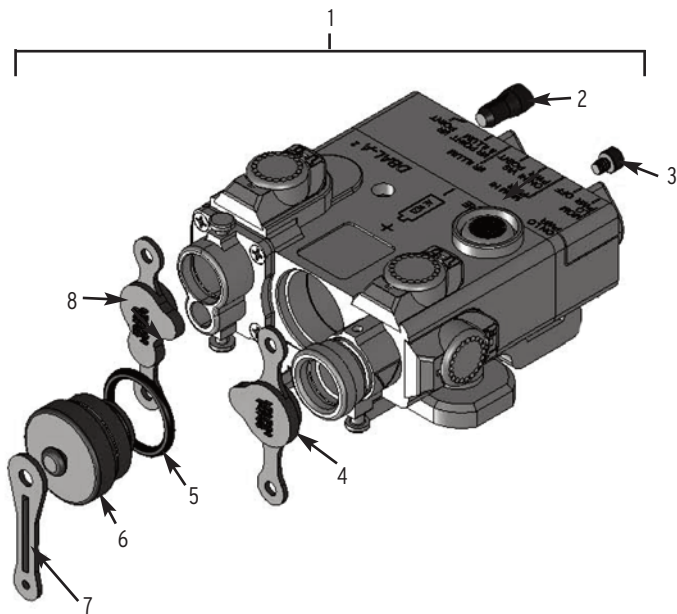


Figure 2. AN/PEQ-15A Assembly

Table 1. Repair Parts List

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO.	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
					GROUP 01 FIG. 2. AN/PEQ-15A ASSEM.	
1	XACKK	N/A	OYR11	40090 40090F	AN/PEQ-15A ASSEMBLY	1
2	PACZZ	4730-01-547-7145	OB107	HKL-313-02	Plug, Jack	1
3	PAFZZ	5305-01-537-1801	OYR11	FC01223	Screw, Cap, Hexagon Head (Safety Screw)	1
4	PACZZ	5340-01-537-0488	OYR11	F4765	Cover, Protective Dust and Moisture Seal (Exit Port Cover Single Beam)	1
5	PACZZ	5331-01-537-0493	OYR11	C02734	O-Ring (Battery Cap)	1
6	PACZZ	5340-01-536-9657	OYR11	FA04533	Cap, Protective, Dust and Moisture Seal (Battery Cap)	1
7	PACZZ	1240-01-552-7695	OB107	ATP-173-02	Retainer, Battery Cap	1
8	PACZZ	5340-01-537-6905	OYR11	F4762	Cover, Protective Dust and Moisture Seal (Exit Port Cover, Dual Beam)	1

NATIONAL STOCK NUMBER (NSN) INDEX

INTRODUCTION

This work package is an index of the national stock number referenced to WP 0019, figure and item for the parts used on the AN/PEQ-15A.

Table 1. SMR Code Explanation

STOCK NUMBER	FIGURE	ITEM
N/A	1	1
5331-01-537-0493	2	5
6150-01-537-0495	1	2
5340-01-536-9657	2	6
8315-01-497-8154	1	3
1240-01-552-7695	2	7
8105-01-368-6253	1	4
5340-01-537-6905	2	8
1240-01-537-0496	1	5
N/A	2	1
4730-01-547-7145	2	2
5305-01-537-1801	2	3
5340-01-537-0488	2	4

NATIONAL STOCK NUMBER (NSN) INDEX

INTRODUCTION

This work package is an index of the part number referenced to WP 0019, figure and item for the parts used on the AN/PEQ-15A.

Table 1. SMR Code Explanation

PART NUMBER	FIGURE	ITEM
40090 40090F	1	1
C02734	2	5
FA04631-7	1	2
FA04533	2	6
ITP-044	1	3
ATP-173-02	2	7
A3186949	1	4
F4762	2	8
FA04768	1	5
40090 40090F	2	1
HKL-313-02	2	2
FC01223	2	3
F4765	2	4

CHAPTER 6 – REFERENCES

SCOPE

This work package lists forms and publications that are referenced in this manual or that contain information applicable to the operation and maintenance of the AN/PEQ-15A.

FIELD MANUALS

FM 4-25.11 First Aid

FORMS

DA Form 2028	Recommended Changes to Publications and Forms
DA Form 2404	Equipment Inspection and Maintenance Record
DA Form 2408-9	Equipment Control Record
DA Form 5988-E	Equipment Inspection and Maintenance Record
DD 361	Transportation Discrepancy Report
SF 364	Report of Discrepancy (ROD)
SF 368	Product Quality Deficiency Report

PAMPLETS

DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms
DA PAM 738-751	Functional Users Manual for The Army Maintenance Management System-Aviation (TAMMS-A)
AR 700-138	Army Logistics Readiness and Sustainability

DA PAM 750-8 The Army Maintenance Management System (TAMMS)
Users Manual

PUBLICATIONS

AR 735-11-2 Reporting of Supply Discrepancies

PUBLIC LAW

Code of Federal Public Contracts and Property Management
Regulations
Title 41, Chapter 101

SUPPLY CATALOGS

CTA 8-100 Army Medical Department Expendable/Durable Items

CTA 50-909 Field and Garrison Furnishings and Equipment

CTA 50-970 Expendable/Durable Items (Except Medical, Class V, Repair
Parts and Heraldic Items)

TECHNICAL BULLETINS

TB 43-0134 Battery Disposition and Disposal

TECHNICAL MANUALS

TM 9-5860-226-13&P Operator and Field Maintenance Manual Including
Repair Parts and Special Tools List for
TM 10471-01/1A AN/PEM-1 Laser Borelight System (LBS-300-A2) and
(LBS-050).

TM 750-244-2 Procedures for Destruction of Electronic Materiel to
Prevent Enemy Use (Electronics Command)

MAINTENANCE ALLOCATION CHART INTRODUCTION

The Army Maintenance System MAC

This introduction provides a general explanation of the maintenance and repair functions.

The MAC (immediately following this introduction) designates overall authority and responsibility for the performance of maintenance tasks on the identified end item or component. The application of the maintenance tasks to the end item or component shall be consistent with the capacities and capabilities of the designated maintenance levels/classes, which are shown in the MAC in column (4). Column (4) is divided into two secondary columns. These columns indicate the maintenance levels/classes of 'Field' and 'Sustainment'. Each maintenance level column is further divided into two sub-columns. These sub-columns identify the maintenance classes and are as follows:

1. Field level maintenance classes:

a. Crew (operator) maintenance. This is the responsibility of a using organization to perform maintenance on its assigned equipment. It normally consists of inspecting, servicing, lubricating, adjusting, and replacing parts, minor assemblies, and subassemblies. Items with a "C" ("O" for joint service reporting) in the third position of the Source, Maintenance, and Recoverability (SMR) code may be replaced at the crew (operator) class. A code of "C" ("O" for joint service) in the fourth position of the SMR code indicates complete repair is authorized at the crew (operator) class.

b. Maintainer maintenance. This is maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion by field level units. This maintenance is performed either on the system or after it is removed. An "F" in the third position of the SMR code indicates replacement of assemblies, subassemblies, or other components are authorized at this level. An "F" in the fourth position of the SMR code indicates complete repair of the identified item is allowed at the Maintainer class. Items repaired at this level are normally returned to the user after maintenance is performed.

2. Sustainment level maintenance classes:

a. Below depot sustainment. This is maintenance accomplished on component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The item subject to maintenance has normally been forwarded to a maintenance facility away from the field level supporting units. An "H" in the third position of the SMR code indicates replacement of assemblies, subassemblies, or other components are authorized at this class. An "H" appearing in the fourth position of the SMR code indicates complete repair is possible at this class. Items are normally returned to the supply system after maintenance is performed at this class.

b. Depot. This is maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. Assets to be repaired at this class are normally returned to an Army Depot or authorized contractor facility. The replace function for this class of maintenance is indicated by the letter "D" or "K" appearing in the third position of the SMR code. A "D" or "K" appearing in the fourth position of the SMR code indicates complete repair is possible at the depot sustainment maintenance level. Items are returned to the supply system after maintenance is performed at this class.

The tools and test equipment requirements table (immediately following the MAC) lists the tools and test equipment (both special tools and common tool sets) required for each maintenance task as referenced from the MAC.

The remarks table (immediately following the tools and test equipment requirements) contains supplemental instructions and explanatory notes for a particular maintenance task.

Maintenance Tasks

Maintenance tasks are limited to and defined as follows:

1. **Inspect.** A function to determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).
2. **Test.** To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards, e.g., load testing of lift devices or hydrostatic testing of pressure hoses.
3. **Service.** Operations are required periodically to keep an item in proper operating condition such as replenishing fuel, lubricants, chemical fluids, or gases.
4. **Adjust.** To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.
5. **Align.** To adjust specified variable elements of an item to bring about optimum or desired performance.
6. **Calibrate.** To determine and cause corrections to be made or to be adjusted on instruments of test, measuring, and diagnostic equipment used in precision measurement. It consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

7. Remove. The act of taking a sub-component off an asset to allow repair or replacement of that sub-component, or to facilitate other maintenance.
8. Install. The act of placing, positioning, or otherwise locating a component or sub-component to make it part of a higher level end item. Install can be to install a new asset for the first time or reinstall an asset previously removed. The maintenance level/class allowed to perform an installation is determined by the third position in the SMR code.
9. Replace. To install a serviceable component in place of one that is unserviceable or a required time change asset. "Replace" is authorized by the MAC and the assigned maintenance class is shown as the third position code of the SMR code.
10. Repair. The application of maintenance actions, including fault location/troubleshooting, removal, installation, disassembly, assembly, or other maintenance actions to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in the item.
11. Paint. This is a function to prepare and apply coats of paint. When used with munitions, the paint is applied so the ammunition can be identified and protected.

NOTE

The following definitions are applicable to the “repair” maintenance task:

- Fault location/troubleshooting. The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (UUT).
 - Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.
12. Overhaul. This is the maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in the appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to a like new condition.
13. Rebuild. This consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

14. Lubricate. The act of applying a material (e.g., oil or grease) to reduce friction and allow a component to operate in a more efficient manner.
15. Mark. The process of restoring obliterated identification on an asset.
16. Pack. To place an item into a container for either storage or shipment after service and other maintenance operations have been completed.
17. Unpack. The act of removing an asset from a storage or shipping container in preparation to perform further maintenance (e.g., repairs or install).
18. Preserve. The action required to treat systems and equipment whether installed or stored, to ensure a serviceable condition.
19. Prepare for use. Those steps required to make an asset ready for other maintenance (e.g., remove preservatives, lubricate, etc.).
20. Assemble. The step-by-step instructions to join the component pieces of an asset together to make a complete serviceable asset.
21. Disassemble. The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).
22. Clean. Step-by-step instructions on how to remove dirt, corrosion or other contaminants from equipment.

23. Non destructive inspection. Step-by-step instructions on preparation and accomplishment inspections which do not destroy or damage the equipment.
24. Radio interference suppression. Step-by-step instructions to ensure installed equipment, either communication or other electronics, does not interfere with installed communication equipment.
25. Place in service. Step-by-step instructions required to place an item into service that is not covered in the service upon receipt work package.
26. Towing. The step-by-step instructions to connect one vehicle to another for the purpose of having one vehicle moved through the motive power of the other vehicle.
27. Jacking. The step-by-step instructions to mechanically raise or lift a vehicle to facilitate maintenance on the vehicle.
28. Parking. Step-by-step instructions to safely place a vehicle in a lot, ramp area or other designated location.
29. Mooring. Step-by-step instructions to secure a vehicle by chains, ropes or other means to protect the vehicle from environmental conditions or secure for transportation.
30. Covering. Step-by-step instructions to place a protective wrapping over a vehicle to protect it from environmental conditions or to hide (e.g., camouflage) it.

31. Hoisting. Step-by-step instructions to allow a vehicle to be raised by cables or ropes through attaching points.
32. Sling loading. Step-by-step instructions to place a sling around a vehicle to allow it to be raised.
33. External power. Step-by-step instructions on how to apply electrical power from any authorized power source (e.g., external generator or facility power).
34. Preparation for storage or shipment. Step-by-step instructions for preparing the equipment for placement into administrative storage or for special transportation requirements.
35. Arm. Detailed instructions on activating munitions prior to use.
36. Load. This may be one of two tasks:
 - a. For transportation, the act of placing assets onto a transportation medium (e.g., pallet, truck, container).
 - b. For weapons/weapons systems, the act of placing munitions into the weapon/weapons system.
37. Unload. This may be one of two tasks:
 - a. For transportation, the act of removing assets from a transportation medium (e.g., pallet, truck, container).
 - b. For weapons/weapons systems, the act of removing munitions from the weapon/ weapons system.
38. Software maintenance. Step-by-step instructions for software maintenance (e.g., installing, un-installing, etc.).

Explanation of Columns in the MAC

Column (1) Group Number. Column (1) lists Functional Group Code (FGC) numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

Column (2) Component/Assembly. Column (2) contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column (3) Maintenance task. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions, refer to “Maintenance tasks” outlined previously).

Column (4) Maintenance Level. Column (4) specifies each level/class of maintenance authorized to perform each function listed in column (3), by indicating work time required in the appropriate sub-column. This work time figure represents the active time required to perform that maintenance task at the indicated level/class of maintenance. If the number or complexity of the tasks within the listed maintenance task varies at different maintenance classes, appropriate work time figures are to be shown for each class.

The work time figure represents the average time required to perform the prescribed task (assembly, subassembly, component, module, end item, or system) on the item under typical operating conditions for that maintenance level/class. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance tasks authorized in the MAC. The symbol designations for the various maintenance levels/classes and classes are as follows:

Field:

- C Crew maintenance
- F Maintainer maintenance

Sustainment:

- L Specialized Repair Activity (SRA)
- H Below depot maintenance
- D Depot maintenance

NOTE

The “L” maintenance class is not included in column (4) of the MAC. Functions to this class of maintenance are identified by work time figure in the “H” column of column (4), and an associated reference code is used in the REMARKS column (6). This code is keyed to the remarks and the SRA complete repair application is explained there.

Column (5) Tools and Equipment Reference Code. Column (5) specifies, by a number code, those common tool sets (not individual tools), common Test, Measurement and Diagnostic Equipment (TMDE), and special tools, special TMDE and special support equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.

Column (6) Remarks Code. When applicable, this Column (6) contains a letter code, in alphabetical order, which is keyed to the remarks table entries.

Explanation of Columns in the Tools and Test Equipment Requirements

Column (1) Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with a code used in column (5) of the MAC.

Column (2) Maintenance Level. The lowest class of maintenance authorized to use the tool or test equipment.

Column (3) Nomenclature. Name or identification of the tool or test equipment.

Column (4) National Stock Number (NSN). The NSN of the tool or test equipment.

Column (5) Tool Number. The manufacturer's part number.

Explanation of Columns in the Remarks

Column (1) Remarks Code. The code recorded in column (6) of the MAC.

Column (2) Remarks. This column lists information pertinent to the maintenance task being performed as indicated in the MAC.

Table 1. Maintenance Allocation Chart (MAC)

(1) Group Number	(2) Component Assembly	(3) Maintenance Function	(4) Maintenance Level				(5) Tools/ Equipment Reference Code	(6) Remarks Code
			Field		Sustainment			
			Crew (C)	Maintainer (F)	Below Depot (H)	Depot (D)		
00	AN/PEQ-15A System	Inspect	0.1	0.1				A
01	AN/PEQ-15A Assembly	Inspect	0.1	0.1				A
		Service	0.1	0.2				A
		Repair	0.1	0.2			1	B, C

Table 2. Tools and Test Equipment

(1) Tool or Test Equipment	(2) Maintenance Level	(3) Nomenclature	(4) National Stock Number	(5) Tool Number
1	F	Tool Kit, Small Arms Repair	5180-01-559-5981	DFP 509

Table 3. Remarks

(1) Reference Code	(2) Remarks
A	Inspect and Service limited to inspection and cleaning of exterior equipment surfaces and cleaning of exterior optical surfaces, cleaning of Battery Compartment and Remote Cable contacts.
B	Repair limited to replacement of battery, Battery Cap, and / or Battery Cap O-ring. (Crew Level)
C	Repair limited to removal/replacement of Battery, Battery Cap, Battery Cap O-ring, Battery Cap Lanyard, Remote Cable Switch, Pattern Generators, Safety Screw, Exit Port Cover (single beam), Exit Port Cover (dual beam). (Field Level).

COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII)

SCOPE

This work package lists COEI and BII for the AN/PEQ-15A to help you inventory items for safe and efficient operation of the equipment.

GENERAL

The COEI and BII information is divided into the following lists:

Components of End Item (COEI). This list is for information purposes only and is not authority to requisition replacements. These items are part of the AN/PEQ-15A. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Items of COEI are removed and separately packaged for transportation or shipment only when necessary. Illustrations are furnished to help you find and identify the items.

Basic Issue Items (BII). These essential items are required to place the AN/PEQ-15A in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the AN/PEQ-15A during operation and when it is transferred between property accounts. Listing these items is your authority to request/requisition them for replacement based on authorization of the end item by the TOE/MTOE. Illustrations are furnished to help you identify the items.

EXPLANATION OF COLUMNS IN THE COEI LIST AND BII LIST

Column (1) Illus Number. Gives you the number of the item illustrated.

Column (2) National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (3) Description, Part Number, and Commercial and Government Entity Code (CAGE). Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI and BII is also included in this column. The last line below the description is the CAGEC (in parenthesis) and the part number.

Column (4) Usable on Code (UOC). When applicable, gives you a code if the item you need is not the same for different models of equipment.

Code Used on

DBL AN/PEQ-15A (Black)

GBL AN/PEQ-15A (Green)

Column (5) Unit of Issue (U/I). Indicates how the physical measurement or count of the item as issued per the National Stock Number shown in column (2).

Column (6) Qty Rqr. Indicates the quantity required.

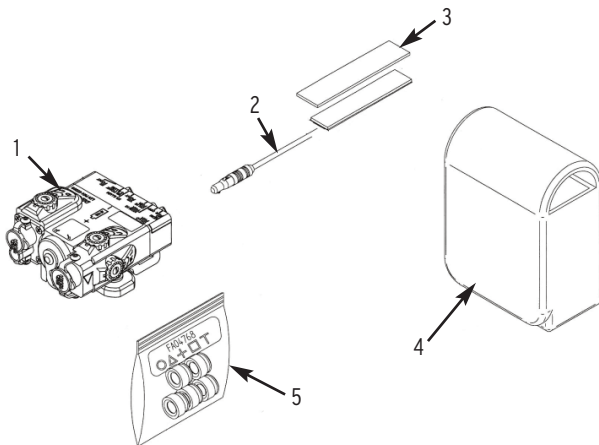


Figure 1. AN/PEQ-15A Components of End Item (COEI)

Table 1. Components of End Item (COEI) List

(1)	(2)	(3)	(4)	(5)	(6)
Illus Number	National Stock Number (NSN)	Description, Part Number (CAGEC)	Usable On Code	U/I	Qty Rqr
1	N/A	AN/PEQ-15A ASSEMBLY Green (FA04875-2), 40090/40090F, (OYR11)	GBL/DBL	EA	1
2	6150-01-537-0495	CABLE ASSEMBLY SWITCH, ELECTRICAL (Remote Cable Switch 7 in.), FA04631-7, (OYR11)	GBL/DBL	EA	1
3	8315-01-497-8154	FASTENER TAPE, PILE, (Loop Tape), ITP-044 / (0B107)	GBL/DBL	EA	1
4	8105-01-368-6253	BAG, TEXTILE, A3186949, 80063	GBL/DBL	EA	1
5	1240-01-537-0496	PATTERN GENERATORS (SET OF 5), FA04768, (OYR11)	GBL/DBL	EA	1

Table 1. Components of End Item (COEI) List

(1)	(2)	(3)	(4)	(5)	(6)
Illus Number	National Stock Number (NSN)	Description, Part Number (CAGEC)	Usable On Code	U/I	Qty Rqr
1	N/A	OPERATOR AND FIELD MAINTENANCE MANUAL TM 9-5855-1912-13&P	GBL/DBL	EA	1
2	N/A	QUICK REFERENCE GUIDE, DBAL-A AN/PEQ-15A	GBL/DBL	EA	1

ADDITIONAL AUTHORIZATION LIST (AAL)

SCOPE

This work package lists additional items that you are authorized for support of the AN/PEQ-15A.

GENERAL

This list identifies items that do not have to accompany the AN/PEQ-15A and that do not have to be turned in with it. These items are authorized to you by CTA, MTOE, TDA or JTA.

Explanation of Columns in the AAL

Column (1) National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (2) Description, Part Number/CAGEC. Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the CAGEC (Commercial and Government entity code) (in parenthesis) and the part number.

Column (3) Usable on Code. When applicable, gives you a code if the item you need is not the same for different models of equipment.

Column (4) Unit of Issue (U/I). Indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (1).

Column (5) Qty Recm. Indicates the quantity recommended.

Table 1. Components of End Item (COEI) List

(1)	(2)	(3)	(4)	(5)
National Stock Number (NSN)	Description, Part Number (CAGEC)	Usable On Code	U/I	Qty Rqr
5995-01-454-7124	Cable Switch, Remote, 12", ITP-053 (FAB60)	DBL	EA	AR
		GBL		
6150-01-363-2798	Cable Switch, Remote, 20", A3259273 (80063)	DBL	EA	AR
		GBL		
6150-01-481-6925	Cable Switch, Remote, 24", A3267746 (80063)	DBL	EA	AR
		GBL		
6150-01-561-3290	Cable Switch, Remote 31", ATP-053-01 (0B107)	DBL	EA	AR
		GBL		
5860-01-471-2091	Laser Borelight System (LBS) (0B107)	DBL	EA	1
		GBL		

EXPENDABLE AND DURABLE ITEMS LIST

SCOPE

This work package lists expendable and durable items that you will need to operate and maintain the AN/PEQ-15A. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts and Heraldic Items), CTA 50-909, Field and Garrison Furnishings and Equipment or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanation of Columns

Column (1) Item No. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item, (e.g., “Use brake fluid (WP 0098, item 5)).

Column (2) Level. This column identifies the lowest level of maintenance that requires the listed item, (C = Operator/Crew, F = Maintainer).

Column (3) National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) Item Name, Description, Part Number/(CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (5) Unit of Issue (U/I). U/I code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1. Components of End Item (COEI) List

(1)	(2)	(3)	(4)	(5)
Item No.	Level	National Stock Number (NSN)	Item Name, Description, Part Number/CAGE	U/I
1	F	6640-00-240-5851	Paper, Lens, NNNP40 (81348)	PG
2	F	6515-00-303-8250	Applicator, Disposable, 30-011 (02773)	PG
3	C	8140-01-072-4276	Pads, Cotton, SM-C-804738-1 (65545)	EA
4	C	6850-01-143-4488	Kit, Lens Cleaning SM-C-804452 (80063)	EA
5	F	6505-00-65n5-8366	Isopropyl Alcohol, NDC00395-1249-16 (07TA6)	BT
6	C	7930-00-664-6910	Glass Cleaner, A-A-40 (58536)	BX
7	C	7920-00-148-9666	Rag, Wiping, A-A-52 (58536)	BE
8	C	6920-01-482-0098	Target, Zeroing, 12988975 (19200)	BX
9	C	7930-00-515-2477	Detergent, General Purpose, A-A-39 (58536)	GL
10	C	6135-01-351-1131	Battery, DL 123A, 5018LC	EA
			Non-Rechargeable (80204)	

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